

**Final Report from the Cayman Islands Tourism Association as to how the Kittiwake project met the goals of the *National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs (BMP Guidance)*, May, 2006 (71 FR 27716). "BMP"**



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**Date: July 6, 2010**

**Overview:**

This documentation has been prepared for the US EPA, MARAD and the CI DOE, as a summary of how the reefing plan and subsequent remediation of the Kittiwake met the goals as defined in the joint MARAD / EPA Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs (BMP Guidance) dated May 2006.

All remediation and diver preparation work was completed by our primary contractor Dominion/American Marine Group under the supervision of the owner Tim Mullane and project supervisor Terry Lunsford.

**Dominion Marine Group (DMG) Shipyard  
425 Campostella Road,  
Norfolk, VA, 757 990-0033 [timmullane@yahoo.com](mailto:timmullane@yahoo.com)**

Environmental remediation of hazardous materials was completed by Envirocon under subcontract to Dominion Marine Group, under the direction of Pete Marquez and Supervisor Luis Vasquez. Envirocon completed the remediation of PCB's, asbestos, rubber, exfoliating paint and scraping all weather decks.

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### **FUELS/OILS/GREASES:**

***BMP Narrative Clean-up Goal:*** Remove liquid fuels and oils and semi-solids (greases) so that: no visible sheen is remaining on the tank surfaces (this includes all interior fittings, piping, structural members); no film or visible accumulation is remaining on any vessel structure or component (e.g., on machinery or from spills on decking or carpet). The end result of such clean-up should be that no sheen be visible upon sinking a vessel.

The Kittiwake clean-up or removal of all liquid fuels, oils, and grease has been accomplished. Although it is impossible to remove 100% of all fuels, oils and grease, a very thorough clean-up was achieved that should result in no visible sheen upon sinking.

Through historical records provided by the Navy, the Kittiwake was noted to be relatively empty of any fuels and oils to start with. Tank soundings from 1998 were provided in the Application to MARAD and Reefing Plan. However, some oils and fuels were found on board the Kittiwake as well as grease in various winches, gearboxes, pumps and the like.

All double bottom tanks were opened, inspected by Dominion Marine Group and then cleaned using rags and oil absorbent materials as needed. Minimal fuel pockets or residue was found, and cleaning generally involved small amounts of fuel removal that could be cleaned with rags and absorbent. In two instances where tanks were quite dirty, the tanks were degreased until the tanks were dry with no residual fuel inside.

All six day tanks for fuel had sludge and small amounts of remaining fluids or sludge.



While manpower intensive, this cleaning method limited the spread of contamination and did not generate much fluid waste to dispose of, given the type of steam cleaner used with minimal steaming hot water discharged. All day tanks for fuel were inspected, then holes at the sides near the bottom of the tanks were cut in each tank that measured approximately 3 feet by 3 feet. A photo of a day tank cut open as an example is shown at left. While empty, the day tanks contained fuel residue and sludge

like material. The sludge was scraped out into buckets, then rag wiped by hand, with the opening large enough for a person to enter. Following hand ragging, all day tanks were pressure washed with a mild degreaser solution, then ragged and dried again by hand. Minimal water volume was used; instead using very hot steam. A ratio of water to degreaser of 1:25 was used to minimize degreasing/cleaners. The surface of all fuel tanks are dry and fuel free. No tanks were left sealed; all tanks are open to easy visual inspection, which also assists in the sinking process by creating minimal air pockets.

All other tanks including sewage, air tanks, ballast tanks and the like were opened and inspected, cleaned as needed.

Between mechanical cleaning and hot steam cleaning, all tanks were able to be cleaned to satisfactory standards. Photos of pressure washer and cleaned winches are shown following.



The diesel piping system in all rooms throughout the ship were cut, drained and cleaned. The steering gear ram was drained and cleaned. The main engine gear sump was opened, pumped and cleaned.

Fuel lines and all pipe fittings were all opened, and all flanges were cut on either side to insure both visual and hand inspections were possible. Ninety percent of all fuel lines in the shaft alley, engine room and propulsion room were removed, with the remaining lines cut open and exposed for visual inspection. A photo of a remaining cut fuel line (yellow) is shown at right.





The majority of fuel lines were found to be clean and empty; several fuel lines required cleaning and 2 fuel lines had fuel still inside, that emptied when cut into the propulsion room and shaft alley respectively. The quantity of fuel was approximately 10 gallons, which was scooped into buckets, then surfaces ragged and cleaned, and then steam cleaned again. These fuel lines were flushed with steam and cleaned after draining. Other fuel lines were inspected and found to be dry and fuel free. Fuel lines were cut throughout the ship, including in the shaft alley, engine room, propulsion room, generator room and towards the forward peak. All fuel lines were yellow in color. All pipe openings are dry and fuel-free to the touch. There are no fuel lines that are not cut and exposed to visual inspection.

From bilges, a total of 4 x 55 gallon drums of oil/fuel/oily water was removed. This work was completed by Envirocon under contract to Dominion Marine Group, and the drums were sent off-site for recycling. Additionally, oily water was pumped into a storage bilge on-site at Dominion Marine's shipyard thereby removing it from the Kittiwake. Many pipes were removed from just above the bilges, in order to allow easy access to cleaning the bilges. A combination of pumps to off-site storage and manually using 5 gallon buckets by hand was followed by ragging, steam cleaning and further ragging. This process was completed a total of 5 times on the bilges. No visible oils or fuels remain and the bilge surfaces are dry and clean, or in some instances, small amounts of water from rain remains with no oily residue or surface film.

No containment boom was placed around the Kittiwake as minimal removal of oils or fuels was necessary.

No emulsified oil, verified by visual inspection remains. Hard/solid grease can be found on some machinery but is old and not in a liquid form. All loose pockets of hard grease have been swept up and or vacuum cleaned to remove the majority of this.

All pressure gauges that were oil filled were removed including those on the 5 x RIX compressors. All other pressure gauges found were not oil filled, due primarily to being used in the diving environment. These had the plastic covers and gaskets removed and approximately 30 were left on board for diver attraction. As a diving ship, the materials in the air lines would have been halocarbon seals due to high oxygen content, including items like synthetic oils, viton o-rings and the like, but have no hydrocarbons in the air lines.

All combustion engines have been removed from the Kittiwake, including the 4 main Caterpillar engines. All engines removed will remain in the US for recycling or parts. Photo of the empty engine room is shown at right along with 1a photo of 2 of the engines on shore.



All hydraulic systems have been removed, with the exception of the steering gear in the stern, needed for towing. The hydraulic fluids and reservoirs were opened in the steering and or cut off and then cleaned with rags, followed by steam cleaning.

Most, but not all auxiliary machinery was removed from the Kittiwake. Exceptions are empty/gutted clean motor blocks, lathe, ironing board, galley steam table (grill removed), compressors (oil free and drive shaft drained and ragged clean), various stainless steel equipment and winches (hot steam pressure washed). Any remaining auxiliary equipment is oil free with grease nipples removed, fluids drained by cutting out or opening any oil reservoirs and ragged or flushed clean.

The Kittiwake had no thrusters, Z-drives or other unconventional propulsion systems. All grease reservoirs were removed from the ship. Grease-packed gearboxes were removed. Areas such as grease packed couplings and stuffing boxes were cleaned manually to remove any visual grease, especially where couplings were opened to remove gaskets. All worm drives were removed, although they showed no signs of grease, other than hardened dry particles.

In general, the decks of all internal compartments were clean of oil and grease films on the floors. Exceptions to this would be the lower machinery rooms. The lower machinery rooms were all cleaned, ragged and then steam cleaned twice to remove any visual residue of oils, fuels or lubricants. The external weather deck had several oil spills from operating equipment (generators) and all weather decking was scraped and removed from the ship the week of June 28 - July 2. The other exception is minor spills when removing oils / fuels from the ship on bulkheads. These areas have all been wiped down with rags and cleaned.

Tanks were opened and cleaned during the remediation time of this project, from March through June 2010.

The removal of all oils and fuels was verified by the following on July 2, 2010. The inspection report is attached as Schedule 1.

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Certified Marine Chemist  
Marine Inspections of Tidewater  
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## **ASBESTOS**

**BMP Narrative Clean-up Goal:** Remove any loose asbestos and asbestos that may become loose during vessel sinking; remove or seal accessible friable asbestos.

All loose asbestos has been removed from the Kittiwake, including all lagging, insulation (whether asbestos or other form of insulation), pipe wrappings, boilers, duct wrapping, steam fittings, smoke stack, panel sheeting, internal insulation behind walls and the like. In order to insure removal of all asbestos, all lagging, wooden and sheet metal was removed from all walls to expose the bare metal framing structure underneath. All equipment was removed from the walls in order to allow access to the interior insulation of the ship.

Envirocon was contracted by Dominion Marine Group to remove all asbestos plus all other insulation, such as foam, fiberglass, etc. A total of 2 x 40 and 1 x 30 cubic yard containers of Asbestos was removed, as shown on the enclosed manifests from Allied Waste Services and Freehold Cartage. Full protection suits, face masks and gloves were used in all instances. Various areas of the ship were temporarily sealed to allow asbestos removal in contained areas. All exposed asbestos was identified by Envirocon and removed during the remediation of the Kittiwake. No Asbestos found was encapsulated or sealed, but rather removed.

The first pass of Asbestos remediation removed or eliminated 100% of all lagging and about 90% of all interior insulation materials. Following this, the final 10% off all insulation materials were hand scraped in the second pass. In both instances, vacuum and brooming were used to clear up any remaining material from the decks. Samples of rooms (engine room, XO quarters, galley) show the bare metal hulls that were achieved by removing all insulation.



Some flooring remains that is sealed (non-friable) part-asbestos in 2 areas of the crew quarters, bridge and the recompression chamber. In the recompression chamber, the flooring was intact except for one corner and where minor peeling was observed which was screwed down and covered by a steel plate to prevent further peeling. Any other loose/peeling areas of flooring were scraped and disposed of, such as crew quarters 1 and 2. As a part of the perpetual maintenance plan in Cayman, should any parts of the ship become loose or floatable, they will be removed by the maintenance crew during monthly inspections, and disposed of in the land fill. Photos following are the bridge showing intact flooring. As this eventually deteriorates, the monthly vessel maintenance plan calls for a dive crew to visit the Kittiwake each month, perform routine maintenance such as removal of any loose debris, report any more significant maintenance needs for follow up and report to the Cayman Islands Department of the Environment all findings. The Maintenance plan is a part of the binding Coastal Work License. The Maintenance Plan is Appendix 13 of the Nov 2008 Application to MARAD.



Intact Bridge Flooring



Intact Chamber Flooring



< Crew quarters scraped of all loose flooring

Most asbestos was found in overhead wrapped and painted lagging, all of which was removed. Some asbestos was found around steam and water pipes, which was removed or the pipes cut out and materials treated appropriately as hazardous materials.

Any pipes that were cut that contained gaskets, be they asbestos or rubber, had all gaskets removed. All hatch gaskets were removed, regardless of the type of material in them.



All overheads, hulls, between room dividers were taken down to bare metal by hand scraping. Even encapsulated wrappings were removed from the Kittiwake. As such, even with deterioration, no asbestos nor other insulating materials should escape into the marine environment once the Kittiwake has been sunk. The only known exception is a small amount of foam contained in the steam table, that was sealed over by welding steel plates over the holes to encapsulate it. Should deterioration set in and the foam become exposed, this will be removed by the maintenance crew.

Asbestos was not tested for, but rather all insulation materials were removed. Included was the oil/water separator that was insulated on the exterior, located in the shaft alley.

Copies of the hazardous material Manifests are attached for all Asbestos removal.

Certification by visual inspections of all Asbestos removal can be attested to as noted following, with a copy of the third party independent inspection report attached as Schedule 2.

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**Environmental Profiles Inc**  
**8805 Columbia 100 Parkway, Suite 100**  
**Columbia, MD 21045**

## **POLYCHLORINATED BIPHENYLS (PCBs)**

**BMP Narrative Clean-up Goal:** Remove all manufactured products containing greater than or equal to ( $\geq$ ) 50 parts per million (ppm) of solid PCBs; remove all liquid PCBs regardless of concentration; remove all materials contaminated by PCB spills where the concentration of the original PCB source is  $\geq$  50 ppm.

No exemption for reefing nor export is being applied for under the Toxic Substance Control Act.

The Kittiwake was cleaned of all known PCB's including the removal of all liquid PCB's and oil spills and of all solid material that could potentially contain PCB's. The remediation of the Kittiwake exceeds the BMP's guidelines in so far all materials suspect of containing PCB's have been removed instead of sampling and testing for PCB's in solids. The exception to this is the paint on the Kittiwake, which was sampled and tested numerous times, with all samples found to be less than 50ppm of any PCB's. The Kittiwake project chose to remove all other known materials that could contain PCB's instead of random sampling, as a more conclusive method of PCB removal.

### **SOLIDS:**

Removal of solids includes all cable insulation, rubber gaskets, thermal insulation material including fiberglass, felt, foam, and cork, voltage regulators, switches, reclosers, bushings, and electromagnets, all electronic motors and equipment, switchboards, and consoles, adhesives and tapes, caulking, rubber isolation mounts, foundation mounts, pipe hangers, transformers, capacitors, and electronic equipment with capacitors and transformers inside, fluorescent light ballasts, electrical cables, felt gasket and faying material, cables, rubber gaskets, battle lanterns, fluorescent light ballasts and plastics. All of these materials have been removed from the Kittiwake.

During the final walk-through with the EPA June 14 - 18, one electric silver motor was found in the lower deck, starboard engine room. This was removed (cut out by torch) and disposed of during the week of the walk through, and was noted as being gone by Laura Johnson of EPA and Scott Slaybaugh of CI DOE. No photos of this exist as it was removed during the walk through.

The approach to clean up of all solids that could contain PCB's was to identify all possible sources, as taken from the BMP guidelines, and remove all materials and treat it as if it were PCB materials for disposal. A total of 2 roll-off containers were removed from the Kittiwake, transported by Wayne Disposal, Inc. of Belleville, MI (800-592-5489). The total volume of potential PCB materials that were removed was 12,721kg (28,045 pounds). Copies of the Haz Mat Manifests are attached.

All carpet, wood and other porous materials (except not all paint) has also been removed as a potential contamination sources of PCB's, in





addition to these items being a fast deteriorating item. One exception would be 2 wooden railing in the upper 2 ship levels from the bridge to the XO's quarters that are in good shape and intact. The railings will be removed in Cayman prior to sinking, but are needed for top side viewing prior to sinking. The second exception is a wooden board (about 3' x 3') in the plotting table (top deck), that will be sunk with the ship, and eventually removed due to deterioration by the monthly maintenance crew. Photos are shown above.

The two spotlights that remain on board the Kittiwake for display in Cayman have been gutted of all electrical cabling, motor, transformers and capacitors. Photos of the spotlights are shown following taken on June 24, 2010.



The Sonar/transducer was cut off in-water in order to remove it from the ship for sinking ,as well as to remove the cable nubs that were contained in. The process involved commercial divers from Philadelphia doing the work after a coffer dam was built

internally to prevent flooding of the ship. After removal, the area was welded over with steel plates and then internally, cement was poured into the bottom of the hull to reinforce the hull for towing.

### **SPILLS:**

One spill area was found on the ship during testing of the paint for PCB's. This area has been referred to as paint sample #67, which was on B-204-E, frame #79 in the main propulsion area on the overhead, lower starboard side. Instead of scraping and removing paint, this entire area was cut out and disposed of as if it was PCB contaminated. More details on this follow in the PCB Paint section of this report following. This was the only (old) oil spill found on the ship and it was successfully remediated. Newer oil spills were found from current working equipment (generators / 2010) that were cleaned as noted in the OILS and FUELS section of this report by scraping off all weather decking ,where the generators were temporarily located.

Other oily surfaces were pressure washed by steam cleaning until no residue remained.

### **LIQUID:**

As defined in the OILS and FUELS section of this report, all electrical motors and equipment were removed, including any oils or fuels contained in them. Thorough clearing by removal of reservoirs, ragging and steam cleaning was conducted on remaining windlasses, winches, hydraulics systems to remove any further oils or lubricants.

### **PAINT: (PCB)**

The exception to removal of all materials suspect for PCB's is in the paint. For paint, the Kittiwake project chose to sample all paint to determine if it contained PCB's, and then treat it accordingly.

The paint sampling started with the Feb 16, 2006 Paint Sample Protocol that was accepted by regulators. Following this, 121 paint samples were taken in May 2006 on the Kittiwake, sufficient to cover all paint types and the overall size of the ship. Particular attention was paid to hot/heated areas and more probable contamination areas such as equipment and machinery rooms. The lab results showed that only one sample, #67, showed a concentration of PCB's => 50 ppm, that being sample #67. The results returned a PCB level of 108 ppm.

The lab results did not have adequate QA/QC reports accompanying them, so a further 120 samples were taken in June 2006. The QA/QC and extraction methods were provided in the Appendixes to the Reefing Plan and Application to MARAD.

A further paint sampling was done in the near proximity of the original sample #67, showing a PCB contamination of Arcolor 1262. Both samples showed an even higher

concentration level of Arcolor 1262 of 3,400ppm. This data indicated that the original sample #67 was at the outskirts or edge of the contaminated area.

A remediation plan was presented and accepted in May 2007 to remediate the contaminated area.

Environmental Profiles, Inc. (EPI) was contracted as an independent third party inspector and produced a new paint sampling protocol, accepted by the regulators, in December of 2007. The purpose of this plan was to verify the remediation of this contaminated area of PCB's once remediated.

Initial reasoning for the spill was an old Worthington generator that sat on top of this area, that could have leaked oils onto the deck and overhead below. After further sampling and analysis, the probable cause of the PCB in the paint in this area was determined to be some piece of machinery spraying upwards, thereby creating a larger area of contamination.

Recent results through an additional paint sampling in April 2010 show no PCB's  $\geq$  50ppm remain in this area. Lab results and QA/QC reports were sent to all parties in May 2010.

The hull paint was samples and tested for both PCB's and TBT's and all results were negative in 2 different samplings. Lab reports and photos were sent previously for the hull paint samples.

Copies of all lab reports, QA/QC reports and protocols are on file with all regulators. Photo documentation was provided for all paint samples.

Certification by visual inspections all PCB removal can be attested to as noted following, with a copy of the third party independent inspection report attached.

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**8805 Columbia 100 Parkway, Suite 100**  
**Columbia, MD 21045**



## ***PAINT***

***Narrative Clean-up Goal: Remove harmful exterior hull anti-fouling systems that are determined to be active; remove exfoliating (peeling) and exfoliated paint.***

All paint was sampled and tested for PCB's and heavy metal and hull paint was also sampled for biocides and TBT's. All test results were negative. Also, as a matter of practicality, the Kittiwake has been laid up in the James River Reserve Fleet since 1994, over 16 years now, and general industry standards, plus BMP guidelines, would dictate that no active anti-fouling ingredients would be present.

Envirocon did further random sampling of paint chips for heavy metals, as the paint was being scraped. These recent reports are included in schedule 5 from Schneider Laboratories.

Interior paint was tested for PCB's as noted in the prior section of this report. No PCB's could be found with the exception of the sample #67 area as noted above.

The entire ship interior was scraped by hand to remove the majority of exfoliating paint from the Kittiwake. Once scraped, Envirocon workers broomed and vacuumed all paint chips into bags for disposal. Additionally, steam pressure was applied to hard to scrape areas such as winches, inside the smoke stack, some lower decks in small quarters. The majority of all exfoliating paint has been scraped off, however, week by week some deterioration will continue to occur.

After vacuuming several times already, the Kittiwake will have a final vacuum prior to departing US waters, and then again be inspected upon arrival in Cayman after a 10 - 12 day tow to Cayman. If needed, further vacuum or sweeping will be done again, to prevent, to the utmost extent possible, loose or exfoliating paint from dispersing into the ocean upon sinking.

As can be easily seen, any paint hull on the Kittiwake (given she is riding very high in the water) is essentially covered with marine growth, and is more than 16 years old. This substantially reduces the potential of any active biocide remaining on the hull. However, as prudent, the Kittiwake had its hull cleaned in-water by divers July 6 - 7, 2010. The letter granting permission to clean the hull in-water in Virginia from the DEQ and the Virginia DEQ policy letter to MARAD (April 2007) were included in the Application to MARAD as Appendix 8a.

The Kittiwake hull cleaning is being done to remove any external exfoliating paint above water line and to remove all marine life organisms from the hull. Photo / video documentation of this task is included in Schedule 6 and 7 of this report.

The hull and sea worthiness of the Kittiwake was inspected by a Marine Surveyor for the integrity of the tow and the absence of most hull paint and/or marine organisms. The report from the Marine Surveyor is included in this final report.

**Marine Surveyor & Consultant #21-1135**  
**Franklin S. Skinner**  
**3424 Talon Court Wilmington, NC 28409**  
**910 791-8870 Cel 910-612-7470 [marinesurveys@msn.com](mailto:marinesurveys@msn.com)**

## ***SOLIDS/DEBRIS/FLOATABLES***

***Narrative Clean-up Goal: Remove loose debris, including materials or equipment not permanently attached to the vessel, which could be transported into the water column during a sinking event.***

All solids, debris, and flotsam that could break free from the Kittiwake during transportation or sinking have been removed. This includes most furniture, and the furniture (or more accurately the metal frames of remaining furniture) has been welded on to the deck. The remaining furniture is several metal bunks, the chart table and metal bases of where tables/benches would have been.

The exception to this would be a small amount of continuing rust debris from deteriorating metals on the Kittiwake. During final inspections in the Cayman Islands, a final room by room walk through will be conducted after arrival and any piles of remaining loose debris will be swept up and/or vacuumed and disposed of on land.

Pumps, lighting and the like from the Kittiwake that was placed onboard for the tow will be removed from the Kittiwake prior to sinking. Any of this type of equipment that came down with the Kittiwake will be returned on the tug boat America that is towing the Kittiwake to Cayman.

All loose materials have been removed or secured.

Large flotsam such as the orange sub buoys have been welded onto the ship.

Loose items such as the fire hose have been re-enforced with metal plating welded onto extend longevity and sustain sinking.

All heavily rusted metals have been cut off, especially found on exterior decks, to minimize any debris during sinking.

No tape, rope, line, wire ties or the like remain onboard the Kittiwake. All decks are clear and the boom has been lowered and welded securely into place on the aft deck.

The ongoing monthly maintenance, committed to by the Lease and Coastal Work License, will insure the general cleanup and removal of any subsequent debris after sinking.

All deck drains have been cleared of debris.

Certification by visual inspections of all Flotsam and Debris removal can be attested to as noted following, with a copy of the third party independent inspection report attached.

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## ***OTHER MATERIALS OF ENVIRONMENTAL CONCERN***

***Narrative Clean-up Goal: Remove other materials that may negatively impact the biological, physical, or chemical characteristics of the marine environment.***

All **equipment** that could contain materials of concern as noted in the BMP's has been removed from the Kittiwake.

All **florescent lights** were removed. Approximately 100 of these were found in overheads, above crew bunks or in restroom facilities.

There were no **batteries** on the Kittiwake and none were found during cleanup nor during inspections. None were removed as none were found on the Kittiwake.

There were no **fire extinguishing systems** on the Kittiwake, except for new working systems in place for cleaning and the tow, which will be removed prior to sinking. All fire hose reels had the elbows and gaskets removed, then were degreased. One hose reel was cut out and disposed of as effective remediation of the parts for gasket removal was not achievable. All fire suppressant storage containers are empty, dry and clean. No fire fighting systems were removed from the Kittiwake as none were found on board.

All **refrigerants and halons** were removed from the vessel. In March 2010, the refrigeration company went to the Kittiwake to remove all coolants from all refrigeration systems. All lines were found to be open/punctured and empty, which coincides with reports from Navy from 1998 that all coolants were removed. All refrigeration units were checked and no coolant was found; hence none was removed.

No **mercury** remains on the Kittiwake. Only 2 small wall mounted thermostats were found that were near the XO's quarters and were painted over in blue paint. Both were removed in whole and were intact and disposed of for mercury contents. The entire guts of the Kittiwake's gyro was removed and is staying in the US. It is at the DMG shipyard. The only remnant of the gyro on the Kittiwake is the external metal shell that resembles a pot belly stove. No radar system or equipment remained on board upon possession of the Kittiwake from MARAD, so none was removed.

No **lead ballast** remains in the Kittiwake. The Kittiwake has been gutted to bare steel hull walls and bulkheads. The lower decks and all internal and hull walls are open including down to the bilges and no lead ballast remains. Lead ballast, along with all other metals were disposed of as scrap. (except for metal treated as PCB from paint sample 67 area)

All **water storage tanks** were opened and inspected. No black water (sewerage) or gray water was found in any tanks on the Kittiwake. These tanks (waste water from sinks, showers, galleys, dishwashers) were all empty and the lines were flushed with hot water.

No **Radioactive Materials** were found on board.



The hull of the Kittiwake was high-pressure washed to remove and **potential Invasive Species**. The chain lockers were emptied, chain laid on board the decks after dunking in and out of the ocean to remove as much loose materials and rust as possible. The chain lockers were subsequently cleaned of any remaining shells, rust and debris. All bilges are empty and dry. No seawater remains in the Kittiwake. Potable water, as needed for the tow, was added for ballast.

The hull of the Kittiwake was cleaned in-water at the shipyard of Dominion marine Group July 6 and 7th. This is in keeping with the CIDOE requirement of hull cleaning no sooner that 3 weeks prior to departure.

The hull cleaning, inspection of the external hull for exfoliating paint were certified by the marine surveyor as noted below.

**Marine Surveyor & Consultant #21-1135**

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**List of Schedules:**

**Schedule 1    Marine Chemist Report**

**Schedule 2    Third Party Independent Inspection Report**

**Schedule 3    Work completed following EPA walk through prior to export**

**Schedule 4    May 29, 2007 and Dec 18, 2008 letters from MARAD/EPA regarding  
final compliance, and CITA responses**

**Schedule 5    Hazardous Materials reports and documentation from Envirocon,  
Inc.**

**Schedule 6    Photos of Cable removal in sonar room and sealing of cavities after  
removal; Photos of 21 sets of rubber gasket removed from seacock's and the sealing  
of cavities after removal**

**Schedule 7    Video of hull cleaning**

**Schedule 1**  
**Marine Chemist Report**

**Schedule 2**  
**Third Party Independent Inspection Report**



30 June 2010

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**Re:    *Report of 3<sup>rd</sup> Party Inspection***  
***Ex-USS Kittiwake (ASR-13)***  
***Norfolk, VA***

Dear Ms. Easterbrook:

Environmental Profiles, Inc. (EPI) was contracted to perform an independent, third party inspection of the Ex-USS Kittiwake to determine if preparation of the vessel had met the goals of *National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs*. The Ex-USS Kittiwake is scheduled to be sunk in the Cayman Islands, BWI to create an artificial reef and diving attraction. The inspection was conducted on June 24, 2010 by AERO EH&S, Inc. personnel S. Michael Derdeyn and Katherine Cavanaugh under the direction of EPI.

## **SCOPE OF WORK**

EPI's contracted scope of work for this inspection included the following items:

- **Asbestos** – Inspect the vessel for suspect asbestos-containing materials that may be loose or may become loose during the vessel sinking, and for friable asbestos that will have to be removed or sealed.
- **PCBs** – Inspect the vessel for manufactured products suspected of containing non-liquid PCBs including but not limited to cable, wire, rubber pipe hanger bushings, ductwork gaskets, electrical capacitors, equipment vibration mounts, fluorescent lighting ballasts, circuit breakers, and putty/caulk.
- **Paint** – Inspect the vessel for the presence of exfoliating (peeling) and exfoliated paint (paint chips).
- **Solids/Debris/Floatables** – Inspect the vessel for loose debris, including materials and equipment that are not permanently attached to the vessel that could be transported into the water column during a sinking event.

- **Other Materials of Environmental Concern** – Inspect for other materials that may negatively impact the biological, physical, or chemical characteristics of the marine environment including wastewater, coolants, batteries, mercury switches, fire suppression equipment, and solid ballast.

The following cleanup goals were also delineated in the *National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs* but were not included in EPI's scope of work:

- Removal of liquid fuels, oils, and semi-solids (grease),
- Removal of all liquid PCBs regardless of concentration and removal all materials contaminated by PCB spills where the concentration of the original PCB source was  $\geq 50$  ppm,
- Removal harmful exterior antifouling hull coatings determined to be active,
- Removal of antimicrobial coatings, and
- Removal of bilge and ballast water.

## FINDINGS

### Asbestos

The vessel was inspected for suspect asbestos-containing materials that were loose or could become loose during the vessel sinking, and for friable asbestos that would have to be removed or sealed. No loose or friable asbestos-containing materials were observed onboard the vessel.

The vessel meets the narrative clean-up goal from the BMP for asbestos-containing materials.

### Polychlorinated Biphenyls (PCBs)

We observed the following suspect PCB-containing materials on the vessel at the time of the inspection:

- Compartment A-403-E – The watertight sonar feeder plate was observed to contain multiple electrical cable “nubs”. We were informed that this plate with the “nubs” would be removed while the vessel is in dry dock because it is located under the waterline and its removal would allow the compartment to flood.
- Various locations – We observed rubber gaskets associated with the sea valves. We were informed that the remaining sea valves would be removed and blanked after the vessel is placed in dry dock.

Once these items are addressed, i.e., removed from the vessel, the narrative clean-up goal from the BMP for PCBs will be satisfied.

### **Paint**

We inspected the vessel for the presence of exfoliating and exfoliated paint. Exfoliating and exfoliated paint had successfully been removed from throughout the interior and exterior of the vessel; however localized areas of ongoing paint exfoliation were observed. Treatment and stabilization of the exfoliating paint has been, and should be, an on-going and continuous process in order to satisfy the narrative clean-up goal from the BMP for paint.

### **Solids/Debris/Floatables**

We inspected the vessel for loose debris, including materials and equipment that were not permanently attached to the vessel that could be transported into the water column during a sinking event.

Vessel debris was observed in the following forms:

- Loose scale and paint chips in limited quantities
- Sea shells and sediment inside of the chain locker A-302-E.
- Sediment on links of the anchor chain.

There were no floatable objects observed within or on the vessel with the following exception:

- Clean-up related debris in the form of the tools and equipment being utilized in the completion of vessel preparation tasks.

Once the removal of these items has been completed, the cleanup goal from the BMP for Solids/Debris/Floatables will be satisfied.

### **Other Materials of Environmental Concern**

We inspected the vessel for other materials that may negatively impact the biological, physical, or chemical characteristics of the marine environment. We inspected for, but did not observe, waste water, coolants, batteries, mercury switches, fire suppression equipment, and solid ballast.

The vessel meets the narrative clean-up goal from the BMP for other materials of environmental concern included in our scope of work.

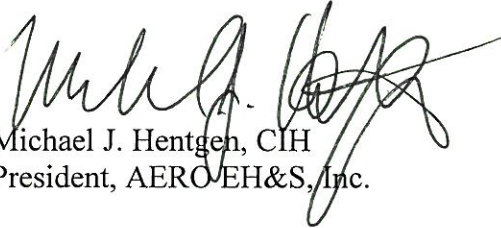
We appreciate the opportunity to perform this third party inspection for the Cayman Islands Tourism Association. The findings, conclusions, and recommendations contained in this summary are drawn from the various quantitative and qualitative factors existing on the days

of the site visits. In addition, the facts in this summary may be subject to professional interpretation, which could result in differing conclusions. If you have any questions concerning our findings, or if we may provide you with additional information, please contact us at your convenience at (410) 480-3636 or (410) 740-9600.

Sincerely,



S. Michael Derdeyn  
Senior Project Manager, AERO EH&S, Inc.



Michael J. Hentgen, CIH  
President, AERO EH&S, Inc.



Marc J. Plisko, CIH  
Project Manager, Environmental Profiles, Inc.



### **Schedule 3**

#### **Work completed following EPA walk through prior to export**

Following the walk through by EPA, MARAD and the CIDOE June 14- 18 the following additional work was completed and verified by the Inspectors noted above.

**Insulation** - Envirocon completed the scraping and removal of all insulation ship-wide, plus completed a second pass through the ship for insulation bits and pieces and the second cleaning, which resulted in all insulation being removed. This was predominantly completed during the June 14- 18 walk through but several areas were still a work in progress and several areas needed additional work.

**Weather decking** - Envirocon completed all exterior weather deck scraping leaving only bare metal on the exterior decks. The decking was disposed of as garbage.

**Steam cleaning** - As can be seen in the Fuels and Oils section above, the ship below decks were all steam cleaned again (twice) to remove final visible films of oil, particularly in the machinery rooms. (engine, propulsion) Exterior winches, bearings and the like were all steam cleaned again. A combination of very hot water with a mild dilution of degreaser (non-phosphate) was used. All surfaces look to be free from any visual signs of oils or fuels.

**Storage Lockers** - The storage lockers beside the shaft alley where oil had dripped down the wall required the shelving to be cut out and then the walls were ragged dry. Minimal oil was on the walls. Rags and absorbent materials were used to clean up the oil residue on the floors, followed by ragging the areas to create a dry, clean looking surface.

**Hull cleaning** - was don in-water July 5 and 6th at the DMG shipyard.

**Sea Cocks** - Removal of sea cock rubber gaskets was completed on 21 of the 34 seacock's above waterline. The brass seacock's were cut off and plating was welded over them for the tow.

**Sonar Cable** - Removal of sonar cables was completed July 5 and 6 in-water. Cables were removed with the sonar/transducer.

**Loose debris** - Ship general clean up is ongoing, but the ship has been totally vacuumed, swept and cleaned of any visibly loose debris, including small piles of rusty metal under winches, in corners or lockers. Loose paint chips on the decking has been vacuumed and cleaned.

**Exfoliating paint** - Envirocon completed the scraping and removal of all major exfoliating paint in the crew quarters, plus completed a second pass through the ship for

insulation bits and pieces and the second cleaning, which resulted in all insulation being removed.

**Diver cutouts** - 5 additional diver access cutouts were cut below decks for diver safety, light penetration and sinking requirements. The steel cutouts were removed and taken as scrap metal.

**External hull cutouts** - 8 external hull cutouts were made in the double hull (not penetrating the internal hull) to facilitate diver access, sinking and post-sinking ship stability. The steel cutouts were removed and taken as scrap metal.

**Anchor brakes** - have been restored and are now working for towing requirements.

**Weather decks** - have been welded and sealed for the tow to Cayman.

**Crow's Nest** - The top railing and light stand were been cut off from the crow's nest to reduce the over height by 3 feet.

**'Dive bell'** was installed on the stern deck in the bracket that originally held the dive bell.

**Ladders** - All ladders below decks were removed except for 3 that allow access to all areas of the Kittiwake. These remaining ladders will be removed in Cayman, but are needed for access to below decks for final inspections upon arrival. They are all metal and pose no environmental impact.

**Schedule 4**  
**May 29, 2007 and Dec 18, 2008 letters from MARAD/EPA regarding final compliance, and CITA responses**

**Responses to conditions from MARAD/EPA in a letter dated May 29, 2007 from David Redford of EPA to Michael Carter of MARAD.**

All responses and answers to the above letter were addressed in the updated Application to MARAD/Reefing Plan dated Nov 2008. These issues were addressed in the updated application, or where guidance was provided, taken into consideration for the final reefing plan.

The Coastal Works License and Ocean Disposal Permit are approved by the Cayman Island Government. There is no additional approval from the Cayman Islands Port Authority other than the acceptance of the sinking site by the Cayman Islands Port Authority, as provided in the Application to MARAD Nov 2008, Appendix 11c.

**Responses to conditions listed from Matt Hale, Director, EPA in a letter dated Dec 18, 2008 to Curt Michanczyk of MARAD:**

- 1 - Documentation of how the vessel met the goals of the BMP's - Contained herein.
  - All work completed was under appropriate US laws
  - The only documentation on inspections from the CI Department of the Environment is the issuance of the Coastal Works Permit License and the Ocean disposal Permit. These are provided in this final inspection report.
- 2 - Compliance with the Cayman Islands environmental laws for import of the Kittiwake is granted by virtue of the issuance of Coastal Works License and the Ocean Disposal Permit.
- 3 - Approval was granted by the Commonwealth of Virginia Department of Environmental Quality for in-water hull cleaning by Francis Daniel in 2007. The letter was included in the Application to MARAD in Appendix 8a.
- 4 - The report on quantities and disposal of PCB's is contained in this final report.

The summary of the requirements is shown following for ease of reference. This is page 6 and 7 of the letter of Dec 18, 2008 as noted above.

***Attachment 2: Outstanding Terms and Conditions for the ex-USS Kittiwake Vessel-to-Reef Project (May 2007)***

EPA has revisited the terms and conditions from the May 2007 letter from David Redford of EPA to Michael Carter of MARAD. While the Cayman Islands have met many of the original terms and conditions, several remain outstanding. EPA recognizes that some remaining terms and conditions cannot be met until after the vessel has been remediated and prepared for towing to the Cayman Islands.

EPA does not object to this pilot project for the transfer of a MARAD ship to a foreign government for the purposes of creating an artificial reef if the remaining actions below are completed and the appropriate documentation is sent to EPA prior to the ex-USS Kittiwake's (Kittiwake) departure from the United States to the Cayman Islands:

- Documentation of how the completed vessel preparation/cleanup achieved each cleanup performance goal in the May, 2006 *BMP Guidance* document. This documentation should be accompanied by certification that the vessel was inspected by a qualified professional (third party) who can verify compliance with the applicant's vessel preparation plan and achievement of the May, 2006 *BMP Guidance* cleanup performance goals.
  - All work conducted under the vessel preparation plan by the primary contractor and all subcontractors needs to comply with all applicable federal laws and regulations related to environmental protection.
  - EPA requests a copy of the results of all inspections conducted by the Cayman Islands Department of the Environment during the various vessel cleanup/remediation phases, at least as they relate to vessel cleanup and remediation. Please send the requested information to:

Laura S. Johnson, EPA Artificial Reef Team Lead, Office of Water  
U.S. EPA, Office of Water  
EPA West – Room 7115M  
1301 Constitution Avenue, N.W.  
Washington, D.C. 20004

Laura Casey, EPA PCB Program, Office of Solid Waste  
U.S. EPA, Office of Solid Waste  
Two Potomac Yard –Room N 5224  
2733 South Crystal Drive  
Arlington, VA 22202

- The applicant or its contractor should provide documentation showing that they have obtained and complied with all applicable Cayman Islands permits and approvals required to sink the vessel in the Cayman Islands, including but not limited to: the Coastal Works License and a permit to sink a vessel.
- The applicant and its contractor provide documentation that they have worked closely with the Commonwealth of Virginia to ensure that hull and tank cleaning is done in accordance with all applicable Commonwealth requirements.
  - The applicant documents state that prior to the Kittiwake departing for Cayman Islands, the hull will be cleaned in order to remove marine species foreign to Cayman waters, and all tanks will be cleaned to prevent the import of any invasive species to the Caymans.
- The applicant provides a final report documenting the remediation and disposal of shipboard wastes and materials known or suspected to contain regulated levels of PCBs.

**Schedule 5**  
**Hazardous Materials reports and documentation from Envirocon, Inc.**

# ENVIROCON, INC.

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## Daily Log Work Summary

<b>Date:</b>	5/17/2010	<b>Project #:</b>	DMG-001	<b>Shift:</b>	
<b>Project Name:</b>	Vessel Kittiwake				
<b>Supervisor:</b>	Luis Vasquez				

Number of personnel on site:	<u>4</u>	Prep Work	yes	no
			<input checked="" type="checkbox"/>	<input type="checkbox"/>
Start Time:	<u>700</u>	Removal	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stop Time:	<u>1600</u>	Final Cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Respiratory Protection:	<u>1/2 Face w/ HEPA</u>	I.H. on site	<input type="checkbox"/>	<input type="checkbox"/>

<b>Work Performed</b>
0700 began prep work area 3 rd deck wheel house for loose paint scrape
0800 start personal sample M. Gutierrez
wet scrape and wipe loose flaking paint at wall, ceiling, pipe and equipment surfaces
HEPA Vacuum and wipe work areas
continue work at pilot house
1500- clean and secure work area - transfer waste container to temp storage area

<b>Problems:</b>
set up temp storage area at main deck laundry /bathroom closet
need storage containers start with 3 only
need 2 more HEPA Vacuums 1 per person.

Supervisor's Signature





# ENVIROCON, INC.

## Daily Log Work Summary

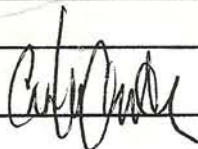
Date:	5/19/2010	Project #:	DMG-001	Shift:	
Project Name:	Vessel Kittiwake				
Supervisor:	Luis Vasquez				

Number of personnel on site:	<u>3</u>	Prep Work	<table><tr><td>yes</td><td>no</td></tr><tr><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>	yes	no	<input checked="" type="checkbox"/>	<input type="checkbox"/>
yes	no						
<input checked="" type="checkbox"/>	<input type="checkbox"/>						
Start Time:	<u>700</u>	Removal	<table><tr><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	<input type="checkbox"/>						
Stop Time:	<u>1530</u>	Final Cleaning	<table><tr><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	<input type="checkbox"/>						
Respiratory Protection:	<u>1/2 Face w/ HEPA</u>	I.H. on site	<table><tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>						

<b>Work Performed</b>
start prep - install poly drop cloth and barriers at 3 rd deck equipment room
0800 start loose and flaking wet scrape at floors, ceiling and equipment
0830 start excursion monitor C. Cortez.
HEPA Vacuum and wipe work areas
Continue removal of lead paint chips 2/3 complete this area
1530- clean and secure work area - transfer waste container to temp storage area

<b>Problems:</b>
water supply - no pressure - pumps failing
re prep storage area - install barriers to limit access by others

Supervisor's Signature





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# ENVIROCON, INC.

## Daily Log Work Summary

Date:	5/20/2010	Project #:	DMG-001	Shift:	
Project Name:	Vessel Kittiwake				
Supervisor:	Luis Vasquez				

Number of personnel on site:	<u>4</u>	Prep Work	<table><tr><td>yes</td><td>no</td></tr><tr><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>	yes	no	<input checked="" type="checkbox"/>	<input type="checkbox"/>
yes	no						
<input checked="" type="checkbox"/>	<input type="checkbox"/>						
Start Time:	<u>700</u>	Removal	<table><tr><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	<input type="checkbox"/>						
Stop Time:	<u>1600</u>	Final Cleaning	<table><tr><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	<input type="checkbox"/>						
Respiratory Protection:	<u>1/2 Face w/ HEPA</u>	I.H. on site	<table><tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>						

<b>Work Performed</b>
0700 continued loose and flaking paint scrape at 3 deck exterior - installed poly drop and barriers
0730 began personal air sample D. Acosta
wet scrape and wipe loose flaking paint at wall, ceiling, pipe and equipment surfaces
HEPA Vacuum and wipe work areas
almost complete at 3 deck exterior work area
1430- clean and secure work area - transfer waste container to temp storage area

<b>Problems:</b>
storage area moved to lower deck- American Marine Group personel working in area.

Supervisor's Signature



# ENVIROCON, INC.

## Daily Log Work Summary

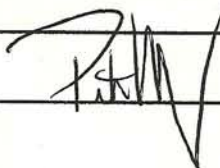
<b>Date:</b>	5/24/2010	<b>Project #:</b>	DMG-001	<b>Shift:</b>	
<b>Project Name:</b>	Vessel Kittiwake				
<b>Supervisor:</b>	Luis Vasquez				

Number of personnel on site:	<u>4</u>	Prep Work	yes	no
			<input checked="" type="checkbox"/>	<input type="checkbox"/>
Start Time:	<u>700</u>	Removal	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stop Time:	<u>1530</u>	Final Cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Respiratory Protection:	<u>1/2 Face w/ HEPA</u>	I.H. on site	<input type="checkbox"/>	<input type="checkbox"/>

<b>Work Performed</b>
0730 began prep of forward main deck area - poly drop cloth and barriers
0800 began personal air sample M. Gutierrez
wet scrape and wipe loose flaking paint at wall, ceiling floor area
HEPA Vacuum and wipe finish areas
complete 1/2 forward area main deck
1500- clean and secure work area - transfer waste container to temp storage area

<b>Problems:</b>
main generator malfunction - cut off
using small 4400 watt portables need 3 to run equipment

Supervisor's Signature



# ENVIROCON, INC.

## Daily Log Work Summary


<b>Date:</b>	5/26/2010	<b>Project #:</b>	DMG-001	<b>Shift:</b>	
<b>Project Name:</b>	Vessel Kittiwake				
<b>Supervisor:</b>	Luis Vasquez				

Number of personnel on site:	<u>4</u>	Prep Work	yes	no
			<input checked="" type="checkbox"/>	<input type="checkbox"/>
Start Time:	<u>800</u>	Removal	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stop Time:	<u>1600</u>	Final Cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Respiratory Protection:	<u>1/2 Face w/ HEPA</u>	I.H. on site	<input type="checkbox"/>	<input type="checkbox"/>

<b>Work Performed</b>
0800 start prep at 2nd deck radio room area
0830 began air pump on Daniel acosta
wet scrape and wipe loose flaking paint at wall, ceiling, pipe and equipment surfaces
HEPA Vacuum and wipe work areas
1300 complete area - began duct and hanger removal
1545- clean and secure work area - transfer waste container to temp storage area

<b>Problems:</b>
duct and misc hanger equipment in our way
began removal for access - causing delays.

Supervisor's Signature





ENVIROCON, INC.

Daily Log Work Summary

Date:	5/28/2010	Project #:	DMG-001	Shift:	
Project Name:	Vessel Kittiwake				
Supervisor:	Luis Vasquez				

Number of personnel on site:	<u>4</u>	Prep Work	yes	no
Start Time:	<u>700</u>	Removal	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stop Time:	<u>1530</u>	Final Cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Respiratory Protection:	<u>1/2 Face w/ HEPA</u>	I.H. on site	<input type="checkbox"/>	<input type="checkbox"/>

<b>Work Performed</b>
700 continued wet scrape of loose paint from work area surfaces
0730 assign personal pump to Marcos
1000 continued work at 2nd deck middle area
HEPA Vacuum and wipe work areas
continued equipment hanger removal grind down rough surface areas smooth
1500- clean and secure work area - transfer waste container to temp storage area

<b>Problems:</b>
out of carbide scrapper blades
need storage bages for paint chip debris

Supervisor's Signature



(2)

# ENVIROCON, INC.

## Daily Log Work Summary

Date:	6/1/2010	Project #:	DMG-001	Shift:	
Project Name: Vessel Kittiwake					
Supervisor: Luis Vasquez					

Number of personnel on site:	4	Prep Work	yes	no
			<input checked="" type="checkbox"/>	<input type="checkbox"/>
Start Time:	700	Removal	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stop Time:	1530	Final Cleaning	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Respiratory Protection:	1/2 Face w/ HEPA	I.H. on site	<input type="checkbox"/>	<input type="checkbox"/>

### Work Performed

0730 prep middle mess/kitchen area main deck - poly drop cloth and barriers

0800 began personal air sample M. Gutierrez

wet scrape and wipe loose flaking paint at wall, ceiling floor area

HEPA Vacuum and wipe finish areas

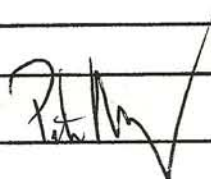
complete 1/3 mess and kitchen work area

1430- clean and secure work area - transfer waste container to temp storage area

### Problems:

water pressure from supply hose - had to carry 5 gallon buckets for wash water.

Supervisor's Signature



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**ENVIROCON, INC.**

3419 Virginia Beach Blvd. Suite C-13 \* Virginia Beach, Virginia 23452

Office: 757.502.8156 \* Fax: 757.502.8158 \* Email: envirocon.inc@earthlink.net

**AIR SAMPLE LOG**Project Name: **Vessel Kittiwake**Location: **425 Campostella Rd - Norfolk, Va.**Project Number: **DMG -001***Calibrate Pumps # 5/10 w/ Robmeter 020*

Sample No.	Sample Date	*Sample Type	***Sample Location/Person-SSN	Pump Start	Pump Stop	Total Time	Average Flow	Pump No.
1	3/30/10	E	M. Gutierrez 7936	0730	0802	30	3.0	5
2	3/30/10	P	M. Gutierrez 7936	0800	1400	360	3.0	5
3	3/30/10	A	OUTSIDE AT Micro Trap exhaust	0715	1430	345	6.0	10

\ Removal and disposal of T.S.I. pipe, duct and surface from mechanical /generator room. Micro-traps and wet methods employed.

\*\*\*Sample Types = Area (A); Excursion (E); Personal (P); Clearance (C); Blank (B)

\*\*\*Personal and Excursion samples must list the name and social security number of the individual sampled

Sampled By

*R. M. [Signature]*

Date

*5/22/10*

Received By

*J. Benjamins /aes*

Date

*4-14-10*

Analyzed By

*K. M. [Signature]*

Date

*4/14/10*



# ENVIROCON, INC.

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Office: 757.502.8156 \* Fax: 757.502.8158 \* Email: envirocon.inc@earthlink.net

## AIR SAMPLE LOG

Project Name: Vessel Kittiwake

30402

Location: 425 Campostella Rd - Norfolk, Va.

Project Number: DMG -001

Calibrate Pumps # 5 & 10 w/ Rotameter # 020

Sample No.	Sample Date	*Sample Type	***Sample Location/Person-SSN	Pump Start	Pump Stop	Total Time	Average Flow	Pump No.
1	3/31/10	E	W. Ruiz	0720	0755	35	3.0	5
2	3/31/10	P	W. Ruiz	0755	1420	385	3.0	5
3	3/31/10	A	Outside area at Microtrap exhaust	0730	1430	420	6.0	10

\ Removal and disposal of T.S.I. pipe, duct and surface from mechanical /generator room. Micro-traps and wet methods employed.

\*\*\*Sample Types = Area (A); Excursion (E); Personal (P); Clearance (C); Blank (B)

\*\*\*Personal and Excursion samples must list the name and social security number of the individual sampled

Sampled By Pete M Date 3/31/10  
Received By Offenburger / ACS Date 4/14/10  
Analyzed By R. M. Massey Date 4/14/10



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**ENVIROCON, INC.**

3419 Virginia Beach Blvd. Suite C-13 \* Virginia Beach, Virginia 23452  
 Office: 757.502.8156 \* Fax: 757.502.8158 \* Email: envirocon.inc@earthlink.net

**AIR SAMPLE LOG**

30400

Project Name: **Vessel Kittiwake**Location: **425 Campostella Rd - Norfolk, Va.**Project Number: **DMG -001**

Calibrate Pump 5 x 10 w/ Rotameter 026

Sample No.	Sample Date	*Sample Type	***Sample Location/Person-SSN	Pump Start	Pump Stop	Total Time	Average Flow	Pump No.
1	4/1/10	E	Milton Carranza	0745	0815	30	3.0	5
2	4/1/10	P	Milton Carranza	0815	1500	405	3.0	5
3	4/1/10	A	out side area at AFD exhaust	0800	1515	435	6.0	10

\ Removal and disposal of T.S.I. pipe, duct and surface from mechanical /generator room. Micro-traps and wet methods employed.

\*\*\*Sample Types = Area (A); Excursion (E); Personal (P); Clearance (C); Blank (B)

\*\*\*Personal and Excursion samples must list the name and social security number of the individual sampled

Sampled By R. M. [Signature] Date 4/1/10  
 Received By G. Bennis [Signature] Date 4-14-10  
 Analyzed By R. M. [Signature] Date 4/14/10

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## ENVIROCON, INC.

3419 Virginia Beach Blvd. Suite C-13 \* Virginia Beach, Virginia 23452  
Office: 757.502.8156 \* Fax: 757.502.8158 \* Email: envirocon.inc@earthlink.net

## AIR SAMPLE LOG

30396

Project Name: Vessel Kittiwake

Location: 425 Campostella Rd - Norfolk, Va.

Project Number: DMG -001

Calibrate Pump # 5 + 10 w/ Ratchet 020

Sample No.	Sample Date	*Sample Type	***Sample Location/Person-SSN	Pump Start	Pump Stop	Total Time	Average Flow	Pump No.
1	4-2-10	E	Luis Vasquez	0800	0826	30	3.0	5
2	4-2-10	P	Luis Vasquez	0830	1515	405	3.0	5
3	4-2-10	A	outside area of AFD exhaust	0815	1530	435	6.0	10

\ Removal and disposal of T.S.I. pipe, duct and surface from mechanical /generator room. Micro-traps and wet methods employed.

\*\*\*Sample Types = Area (A); Excursion (I); Personal (P); Clearance (C); Blank (B)

\*\*\*Personal and Excursion samples must list the name and social security number of the individual sampled

Sampled By Pat M Date 4-2-10  
Received By Bernison Iles Date 4-14-10  
Analyzed By R. M. M. M. Date 4/14/10

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**ENVIROCON, INC.**

3419 Virginia Beach Blvd. Suite C-13 \* Virginia Beach, Virginia 23452  
 Office: 757.502.8156 \* Fax: 757.502.8158 \* Email: envirocon.inc@earthlink.net

**AIR SAMPLE LOG**

30392

Project Name: Vessel Kittiwake

Location: 425 Campostella Rd -- Norfolk, Va.

Project Number: DMG -001

Calibrate Pumps # 5 + 10 w/ Rotameter 020

Sample No.	Sample Date	*Sample Type	***Sample Location/Person-SSN	Pump Start	Pump Stop	Total Time	Average Flow	Pump No.
1	4/5/10	E	MARCOS Gutierrez	0715	0745	30	3.0	5
2	4/5/10	P	MARCOS Gutierrez	0745	1430	405	3.0	5
3	4/5/10	A	Outside Area AFD Exhaust	0730	1400	390	6.0	10

1 Removal and disposal of T.S.I. pipe, duct and surface from Mess Hall and lounge decks. Micro-traps and wet methods employed.

\*\*\*Sample Types = Area (A); Excursion (E); Personal (P); Clearance (C); Blank (B)

\*\*\*Personal and Excursion samples must list the name and social security number of the individual sampled

Sampled By P. M. Date 4-5-10

Received By G. Bennett Date 4-14-10

Analyzed By K. M. N. ALS Date 4/19/10



# ENVIROCON, INC.

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Office: 757.502.8156 \* Fax: 757.502.8158 \* Email: envirocon.inc@earthlink.net

## AIR SAMPLE LOG

30397

Project Name: Vessel Kittiwake

Location: 425 Campostella Rd - Norfolk, Va.

Project Number: DMG-001

Calibrate Pumps 5 + 10 w/ Rotometer 020

Sample No.	Sample Date	*Sample Type	***Sample Location/Person-SSN	Pump Start	Pump Stop	Total Time	Average Flow	Pump No.
1	4-6-10	E	Milton Carranza	0730	0800	30	3.0	5
2	4-6-10	P	Milton Carranza	0800	1400	360	3.0	5
3	4-6-10	A	OUTSIDE AREA AT AFD EXHAUST	0740	1430	410	6.0	10

1 Removal and disposal of T.S.I. pipe, duct and surface from Mess Hall and lounge decks. Micro-traps and wet methods employed.

\*\*\*Sample Types = Area (A); Excursion (E); Personal (P); Clearance (C); Blank (B)

\*\*\*Personal and Excursion samples must list the name and social security number of the individual sampled

Sampled By	<i>Pete My</i>	Date	4-6-10
Received By	<i>J. Benson / aas</i>	Date	4-14-10
Analyzed By	<i>R. V. King ACS</i>	Date	4/14/10



**FREEHOLD CARTAGE INC.**P.O. BOX 5010 • FREEHOLD, NJ 07728-5010  
(732) 462-1001 • FAX (732) 308-0924**BILL OF LADING**  
FCI EPA ID NO. NJD054126164**S 219636**350 Pigeon Point Road  
New Castle, DE 19720  
Phone: (302) 658-2005  
Fax: (302) 658-6229175 Bartow Mun. Airport  
Bartow, FL 33830  
Phone: (863) 533-4599  
Fax: (863) 533-16135533 Dunham Road  
Maple Heights, OH 44137  
Phone: (330) 835-3473  
Fax: (330) 835-3732108 Monahan Avenue  
Dunmore, PA 18512  
Phone: (570) 342-7232  
Fax: (570) 342-7367132 Myrtle Beach Hwy.  
Sumter, SC 29153  
Phone: (803) 773-2611  
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS Dominion Marine Group 425 Compostella Rd Norfolk, VA		PHONE (AREA CODE) TRACTOR 820 TRAILER 402		APPOINTMENT TIME :	
FCI REP. LOADING (PRINT) Chris Sommers	PROCEDURE Removal	EQUIP. SPOTTED —	EQUIP. REMOVED 0410	TIME AT SHIPPER :	(MILITARY TIME ONLY) :
COMMENTS OR DELAYS AT SHIPPER				EQUIPMENT USED Roll-off	

BROKER:		MANIFEST / DOCUMENT NO. 0052301311JK
PO #	WO #	

(X) HM	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM
X 1	See Manifest	9	3432	11	1	CH	30	Y		S
2										
3										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER.
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SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the shipper is obligated to pay the agreed rate offered to the contractor.

PLEASE PRINT NAME/TITLE Terry W. Lunsford	SHIPPER'S SIGNATURE X	DATE LOADED 6/19/10 MO. DAY YR.
I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.		

CONSIGNEE NAME/ADDRESS Wayne Disposal 41350 I-44 Service Rd Belleville, MI		PHONE (AREA CODE) TRACTOR TRAILER		APPOINTMENT TIME :	
FCI REP. UNLOADING (PRINT)	PROCEDURE Unload	EQUIP. SPOTTED 04	EQUIP. REMOVED 10	TIME AT CONSIGNEE :	(MILITARY TIME ONLY) :
COMMENTS OR DELAYS AT CONSIGNEE 30				EQUIPMENT USED Roll-off	

PLEASE PRINT NAME/TITLE	CONSIGNEE SIGNATURE X	DATE UNLOADED / / MO. DAY YR.
-------------------------	--------------------------	-------------------------------------

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MI UPW-0190713-OH	15939	QUEBEC, CANADA QC-6ML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original  
Yellow - FCI Billing  
Blue - FCI Office/Customer  
Green - Retained by TSDF  
Gold - Retained by Generator**S 219636**



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**SCHNEIDER LABORATORIES**

INCORPORATED

2512 W. Cary Street • Richmond, Virginia • 23220-5117  
804-353-6778 • 800-785-LABS (5227) • (FAX) 804-359-1475*Excellence in Service and Technology*

AIHA/ELLAP 100527, NVLAP 101150-0, NYELAP/NELAC 11413, CAELAP 2078, NC 593, SC 93003

**LABORATORY ANALYSIS REPORT**

Air Filter Lead Analysis based on NIOSH 7082 Method

Using SLI P22 A14

ACCOUNT #: 953-10-5596  
 CLIENT: APPLIED LABORATORY SERVICES  
 ADDRESS: 4101 GRANBY ST STE 404  
 NORFOLK, VA 23504-1117

DATE RECEIVED: 6/8/2010  
 DATE ANALYZED: 6/8/2010  
 DATE REPORTED: 6/9/2010

PROJECT NAME: Vessel Kittiwake  
 JOB LOCATION: 425 Campostella Rrl  
 PROJECT NO.: DMG-001  
 PO NO.:

Sample Type: AIR

SLI Sample No.	Client Sample No.	Collection Date	Sample Description	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total Lead (µg)*	Actual Exp (µg/m³)	8 Hour TWA (µg/m³)
30606693	1	5/20/2010	Acosta, D.	285	3.00	855.00	2.27	2.66	1.58
			7:30 AM						
30606694	2	5/20/2010	Blank				< 2.00		

Analysis Run ID: 45863

Analyst: Regina E. Pittman

Total Number of Pages in Report: 1

Results relate only to samples as received by the laboratory.

Final concentration calculations are based on client supplied information.

Reviewed By

Abisola O. Kasali, Analyst

Visit [www.slabinc.com](http://www.slabinc.com) for current certifications.

Minimum Reporting Limit: 2 µg Total Lead. OSHA PEL is 50 µg/m³ for the 8 hr TWA; OSHA action level is 30 µg/m³ for the 8 Hr TWA. All internal QC parameters were met. Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled. \*Data precision justifies 2 significant figures. Unusual sample conditions, if any, are described. Results are not blank-corrected unless noted by analyst. The client is responsible for verifying applicable standards and limits. See [www.osha.gov](http://www.osha.gov) (29 CFR

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AIHA/ELLAP 100527, NVLAP 101150-0, NYELAP/NELAC 11413, CAELAP 2078, NC 593, SC 93003

## LABORATORY ANALYSIS REPORT

Air Filter Lead Analysis based on NIOSH 7082 Method

Using SLI P22 A14

ACCOUNT #: 953-10-5594  
CLIENT: APPLIED LABORATORY SERVICES  
ADDRESS: 4101 GRANBY ST STE 404  
NORFOLK, VA 23504-1117

DATE RECEIVED: 6/8/2010  
DATE ANALYZED: 6/8/2010  
DATE REPORTED: 6/9/2010

PROJECT NAME: Vessel Kittiwake  
JOB LOCATION: 425 Campostella Rd  
PROJECT NO.: DMG-001  
PO NO.:

Sample Type: AIR

SLI Sample No.	Client Sample No.	Collectio Date	Sample Description	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total Lead ( $\mu\text{g}$ ) <sup>*</sup>	Actual Exp ( $\mu\text{g}/\text{m}^3$ )	8 Hour TWA ( $\mu\text{g}/\text{m}^3$ )
30606605	1	6/1/2010 8:00 AM	Gutierrez, M.	210	3.00	630.00	< 2.00	< 3.17	< 1.39
30606606	2	6/1/2010					< 2.00		

Analysis Run ID: 45863

Analyst: Regina E. Pittman

Total Number of Pages in Report: 1

Results relate only to samples as received by the laboratory.

Final concentration calculations are based on client supplied information.

Reviewed By

Abisola O. Kasali, Analyst

Visit [www.slabinc.com](http://www.slabinc.com) for current certifications.

Minimum Reporting Limit: 2  $\mu\text{g}$  Total Lead. OSHA PEL is 50  $\mu\text{g}/\text{m}^3$  for the 8 hr TWA; OSHA action level is 30  $\mu\text{g}/\text{m}^3$  for the 8 Hr TWA. All internal QC parameters were met. Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled. \*Data precision justifies 2 significant figures. Unusual sample conditions, if any, are described. Results are not blank-corrected unless noted by analyst. The client is responsible for verifying applicable standards and limits. See [www.osha.gov](http://www.osha.gov) (29 CFR



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AIHA/ELLAP 100527, NVLAP 101150-0, NYELAP/NELAC 11413, CAELAP 2078, NC 593, SC 93003

**LABORATORY ANALYSIS REPORT**

Air Filter Lead Analysis based on NIOSH 7082 Method

Using SLI P22 A14

ACCOUNT #: 953-10-5597  
CLIENT: APPLIED LABORATORY SERVICES  
ADDRESS: 4101 GRANBY ST STE 404  
NORFOLK, VA 23504-1117DATE RECEIVED: 6/8/2010  
DATE ANALYZED: 6/8/2010  
DATE REPORTED: 6/9/2010PROJECT NAME: Vessel Kittiwake  
JOB LOCATION: 425 Campostella Rd  
PROJECT NO.:  
PO NO.:

Sample Type: AIR

SLI Sample No.	Client Sample No.	Collectio Date	Sample Description	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total Lead (µg)*	Actual Exp (µg/m³)	8 Hour TWA (µg/m³)
30606765	1	5/17/2010	Gutierrez, M. 8:00 AM	240	3.00	720.00	< 2.00	< 2.78	< 1.39
30606766	2	5/17/2010					< 2.00		

Analysis Run ID: 45863

Analyst: Regina E. Pittman

Total Number of Pages in Report: 1

Results relate only to samples as received by the laboratory.

Final concentration calculations are based on client supplied information.

Reviewed By

Abisola O. Kasali, Analyst

Visit [www.slabinco.com](http://www.slabinco.com) for current certifications.

Minimum Reporting Limit: 2 µg Total Lead. OSHA PEL is 50 µg/m³ for the 8 hr TWA; OSHA action level is 30 µg/m³ for the 8 Hr TWA. All internal QC parameters were met. Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled. \*Data precision justifies 2 significant figures. Unusual sample conditions, if any, are described. Results are not blank-corrected unless noted by analyst. The client is responsible for verifying applicable standards and limits. See [www.osha.gov](http://www.osha.gov) (29 CFR

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**LABORATORY ANALYSIS REPORT**

Air Filter Lead Analysis based on NIOSH 7082 Method

Using SLI P22 A14

ACCOUNT #: 953-10-5593  
 CLIENT: APPLIED LABORATORY SERVICES  
 ADDRESS: 4101 GRANBY ST STE 404  
 NORFOLK, VA 23504-1117

DATE RECEIVED: 6/8/2010  
 DATE ANALYZED: 6/8/2010  
 DATE REPORTED: 6/9/2010

PROJECT NAME: Vessel Kittiwake  
 JOB LOCATION: 425 Campostella Rd  
 PROJECT NO.: DMG-001  
 PO NO.:

Sample Type: AIR

SLI Sample No.	Client Sample No.	Collection Date	Sample Description	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total Lead (µg)*	Actual Exp (µg/m³)	8 Hour TWA (µg/m³)
30606497	1	5/19/2010	Cortez, C. 8:30 AM	330	3.00	990.00	< 2.00	< 2.02	< 1.38
30606498	2	5/19/2010					< 2.00		

Analysis Run ID: 45883

Analyst: Regina E. Pittman

Total Number of Pages in Report: 1

Results relate only to samples as received by the laboratory.

Final concentration calculations are based on client supplied information.

Reviewed By

*Abisola O. Kasali*

Abisola O. Kasali, Analyst

Visit [www.slabinco.com](http://www.slabinco.com) for current certifications.

Minimum Reporting Limit: 2 µg Total Lead. OSHA PEL is 50 µg/m³ for the 8 hr TWA; OSHA action level is 30 µg/m³ for the 8 Hr TWA. All internal QC parameters were met. Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled. \*Data precision justifies 2 significant figures. Unusual sample conditions, if any, are described. Results are not blank-corrected unless noted by analyst. The client is responsible for verifying applicable standards and limits. See [www.osha.gov](http://www.osha.gov) (29 CFR

2A

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AIHA/ELLAP 100527, NVLAP 101150-0, NYELAP/NELAC 11413, CAELAP 2078, NC 593, SC 93003

**LABORATORY ANALYSIS REPORT**

Lead Analysis based on EPA 7000B Method and EPA SW846 Method 1311 (TCLP)

Using SLI P33 A14

ACCOUNT #: 953-10-5592  
CLIENT: APPLIED LABORATORY SERVICES  
ADDRESS: 4101 GRANBY ST. STE 404  
NORFOLK, VA 23504-1117

DATE RECEIVED: 6/8/2010  
DATE ANALYZED: 6/9/2010  
DATE REPORTED: 6/9/2010

PROJECT NAME: Vessel Kittiwake  
JOB LOCATION: 425 Campostelle Rd  
PROJECT NO.:  
PO NO.:

Sample Type: TCLP

SLI Sample No.	Client Sample No.	Collection Date	Sample Description	Initial pH	Lead Conc. (mg/L)*
30606490	1		Storage Bags	6.70	4.5

Analysis Run ID: 45868

Analyst: MOHAMMED ELTILIB

Total Number of Pages in Report: 1

Results relate only to samples as received by the laboratory.

Reviewed By  Mohammed Eltilib, Metals Team LeaderVisit [www.slabinc.com](http://www.slabinc.com) for current certifications.

Minimum Reporting Limit: 0.2 mg/L lead concentration. EPA Regulatory Limit is 5.0 mg/l. All internal QC parameters were met.  
\*Data precision justifies 2 significant figures. Unusual sample conditions, if any, are described. All testing is performed in strict accordance with Schneider Laboratories, Inc. protocol. Note on measurement units: mg/l = ppm (parts per million)



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804-353-6778 • 800-785-LABS (5227) • (FAX) 804-359-1475*Excellence in Service and Technology*

AIHA/ELLAP 100527, NVLAP 101150-D, NYELAP/NELAC 11413, CAELAP 2078, NC 593, SC 93003

**LABORATORY ANALYSIS REPORT**

Air Filter Lead Analysis based on NIOSH 7082 Method

Using SLI P22 A14

ACCOUNT #: 953-10-5590  
 CLIENT: APPLIED LABORATORY SERVICES  
 ADDRESS: 4101 GRANBY ST STE 404  
 NORFOLK, VA 23504-1117

DATE RECEIVED: 6/8/2010  
 DATE ANALYZED: 6/8/2010  
 DATE REPORTED: 6/10/2010

PROJECT NAME: Vessel Kittiwake  
 JOB LOCATION: 425 Campostella Rd  
 PROJECT NO.: DMG-001  
 PO NO.:

Sample Type: AIR

SLI Sample No.	Client Sample No.	Collectio Date	Sample Description	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total Lead (µg)*	Actual Exp (µg/m³)	8 Hour TWA (µg/m³)
30606476	1	5/24/2010	Gutierrez, M, 8:00 AM	270	3.00	810.00	< 2.00	< 2.47	< 1.39
30606477	2	5/24/2010					< 2.00		

Analysis Run ID: 45863

Analyst: Regina E. Pittman

Total Number of Pages in Report: 1

Results relate only to samples as received by the laboratory.

Final concentration calculations are based on client supplied information.

Reviewed By

Abisola O. Kasali, Analyst

Visit [www.slabinco.com](http://www.slabinco.com) for current certifications.**Amended Report**

Minimum Reporting Limit: 2 µg Total Lead. OSHA PEL is 50 µg/m³ for the 8 hr TWA; OSHA action level is 30 µg/m³ for the 8 Hr TWA. All internal QC parameters were met. Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled. \*Data precision justifies 2 significant figures. Unusual sample conditions, if any, are described. Results are not blank-



## FREEHOLD CARTAGE INC.

P.O. BOX 5010 • FREEHOLD, NJ 07728-5010  
(732) 462-1001 • FAX (732) 308-0924BILL OF LADING  
FCI EPA ID NO. NJD054126164

\$ 219636

350 Pigeon Point Road  
New Castle, DE 19720  
Phone: (302) 658-2005  
Fax: (302) 658-6229175 Bartow Mun. Airport  
Bartow, FL 33830  
Phone: (863) 533-4599  
Fax: (863) 533-16135533 Dunham Road  
Maple Heights, OH 44137  
Phone: (330) 835-3473  
Fax: (330) 835-3732108 Monahan Avenue  
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Phone: (570) 342-7232  
Fax: (570) 342-7367132 Myrtle Beach Hwy.  
Sumter, SC 29153  
Phone: (803) 773-2611  
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS Dominion Marine Group 425 Compostella Rd Norfolk VA		PHONE (AREA CODE) TRACTOR 820 TRAILER 402		APPOINTMENT TIME :	
FCI REP. LOADING (PRINT) Chris Sommers	PROCEDURE Removal	EQUIP. SPOTTED /	EQUIP. REMOVED 0410	TIME AT SHIPPER (MILITARY TIME ONLY) :	ARRIVAL TIME :
COMMENTS OR DELAYS AT SHIPPER				EQUIPMENT USED Roll-off	

BROKER		MANIFEST / DOCUMENT NO. 6052301311JK	
PO#	WO#		

(X) HM	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM
X 1	See Manifest	9	3432	11	1	CH	30	Y		S
2										
3										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER.
---

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the shipper is obligated to pay the agreed rate offered to the contractor.

PLEASE PRINT NAME/TITLE TERRY W. LUNDGREN	SHIPPER'S SIGNATURE X	DATE LOADED 6/9/10 MO. DAY YR.
I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.		

CONSIGNEE NAME/ADDRESS Wayne Disposal 49350 I-44 Service Rd Belleville, MI		PHONE (AREA CODE) TRACTOR TRAILER		APPOINTMENT TIME :	
FCI REP. UNLOADING (PRINT)	PROCEDURE Unload	EQUIP. SPOTTED 04	EQUIP. REMOVED 10	TIME AT CONSIGNEE (MILITARY TIME ONLY) :	ARRIVAL TIME :
COMMENTS OR DELAYS AT CONSIGNEE 30				EQUIPMENT USED Roll-off	
PLEASE PRINT NAME/TITLE		CONSIGNEE SIGNATURE X		DATE UNLOADED / / MO. DAY YR.	

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MI UPW-0190713-OH	15939	QUEBEC, CANADA QC-6ML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original  
Yellow - FCI Billing  
Blue - FCI Office/Customer  
Green - Retained by TSDF  
Gold - Retained by Generator

\$ 219636



<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <b>VAR000509281</b>	2. Page 1 of <b>1</b>	3. Emergency Response Phone <b>540-424-3124</b>	4. Manifest Tracking Number <b>005730131 JJK</b>				
5. Generator's Name and Mailing Address <b>DOMINION MARINE GROUP PO BOX 28 NORFOLK, VA 23501</b>			Generator's Site Address (if different than mailing address) <b>425 COMPOSTELLA ROAD NORFOLK, VA 23523</b>						
Generator's Phone: <b>757 990-0033</b>									
6. Transporter 1 Company Name <b>Freehold Cartage, Inc.</b>				U.S. EPA ID Number <b>NJD054126164</b>					
7. Transporter 2 Company Name				U.S. EPA ID Number					
8. Designated Facility Name and Site Address <b>WAYNE DISPOSAL, INC. 49350 N. I-94 SERVICE DRIVE BELLEVILLE, MI 48111</b>				U.S. EPA ID Number <b>MID048090633</b>					
Facility's Phone: <b>800-592-5489</b>									
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
			No.	Type					
	X	1. <b>UN3432, WASTE POLYCHLORINATED BIPHENYLS, SOLID, 9, PGII</b>	1	CM	2721	Kg	<b>PCB1</b>		
		2.							
		3.							
	4.								
14. Special Handling Instructions and Additional Information <b>1) R102078WDI ; ERG #: 171 Certificates of Disposal are Required, Send to PEI</b>									
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.									
Generator's/Offor's Printed/Typed Name		Signature			Month	Day	Year		
<i>Isaac A. ...</i>		<i>[Signature]</i>			6	9	10		
INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: _____ Date leaving U.S.: _____						
	Transporter signature (for exports only): _____								
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials								
	Transporter 1 Printed/Typed Name <i>Christopher ...</i>		Signature <i>[Signature]</i>			Month	Day	Year	
	Transporter 2 Printed/Typed Name		Signature			Month	Day	Year	
DESIGNATED FACILITY	18. Discrepancy								
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection								
	Manifest Reference Number: _____								
	18b. Alternate Facility (or Generator)						U.S. EPA ID Number		
	Facility's Phone: _____								
	18c. Signature of Alternate Facility (or Generator)						Month	Day	Year
	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								
	1.	2.	3.	4.					
	20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a								
	Printed/Typed Name			Signature			Month	Day	Year

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <b>VAR000509261</b>	2. Page 1 of <b>1</b>	3. Emergency Response Phone <b>540-424-3124</b>	4. Manifest Tracking Number <b>005730131 JJK</b>		
5. Generator's Name and Mailing Address <b>DOMINION MARINE GROUP PO BOX 28 NORFOLK, VA 23501</b>			Generator's Site Address (if different than mailing address) <b>425 COMPOSTELLA ROAD NORFOLK, VA 23523</b>				
Generator's Phone: <b>757 990-0033</b>							
6. Transporter 1 Company Name <b>Freehold Cartage, Inc.</b>			U.S. EPA ID Number <b>NJD054126164</b>				
7. Transporter 2 Company Name			U.S. EPA ID Number				
8. Designated Facility Name and Site Address <b>WAYNE DISPOSAL, INC. 49350 N. I-94 SERVICE DRIVE BELLEVILLE, MI 48111</b>			U.S. EPA ID Number <b>MID048090633</b>				
Facility's Phone: <b>800-592-5489</b>							
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. <b>UN3432, WASTE POLYCHLORINATED BIPHENYLS, SOLID, 9, PGII</b>		1		2721	Kg	PCB1
	2.						
	3.						
	4.						
14. Special Handling Instructions and Additional Information <b>1) E102078WDI ; ERG #: 171 Certificates of Disposal are Required, Send to PEI</b>							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offor's Printed/Typed Name <i>Larry A. ...</i>			Signature <i>[Signature]</i>			Month Day Year <i>6 9 10</i>	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name <i>Christopher ...</i>			Signature <i>[Signature]</i>			Month Day Year <i>06 09 10</i>	
Transporter 2 Printed/Typed Name			Signature			Month Day Year	
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
Manifest Reference Number: _____							
18b. Alternate Facility (or Generator) U.S. EPA ID Number							
Facility's Phone: _____							
18c. Signature of Alternate Facility (or Generator) Month Day Year							
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1.		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name			Signature			Month Day Year	





# NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.  
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. A 013158

## Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: American Machine b. Generating Location: 425 Compositelle Rd  
c. Address: 425 Compositelle Rd d. Address: same  
NOVA, VA  
e. Phone No.: \_\_\_\_\_ f. Phone No.: \_\_\_\_\_  
If owner of the generating facility differs from the generator, provide:  
g. Owner's Name: \_\_\_\_\_ h. Owner's Phone No.: \_\_\_\_\_  
i. ALLIED WASTE CODE 

4	1	8	7	8	1	0	1	8	8
---	---	---	---	---	---	---	---	---	---

 Containers 

--	--	--	--	--	--

 TYPE  
DM - METAL DRUM  
DP - PLASTIC DRUM  
B - BAG  
BA - 6 MIL. PLASTIC BAG  
or WRAP  
T - TRUCK  
O - OTHER  
j. Description of Waste: RC ASBESTOS, CLASS 9, NA2212, 14 Quantity 

--	--	--	--	--	--

 Units 

--	--	--	--	--	--

 No. 

--	--	--	--	--	--

 TYPE 

--	--	--	--	--	--

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Generator Authorized Agent Name Terry C. Lumbert Signature Terry C. Lumbert Shipment Date 

0	4	0	9	1	0
---	---	---	---	---	---

## Section II TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

### TRANSPORTER I

a. Name: United Dry  
b. Address: 161 Wellman St  
Norfolk, VA 23502  
c. Driver Name/Title: Gregory Robert Driver  
d. Phone No.: 257 557 6701 e. Truck No.: 3-101  
f. Vehicle License No./State: 25 157  
Acknowledgement of Receipt of Materials.

g. Driver Signature [Signature] Shipment Date 

0	4	0	9	1	0
---	---	---	---	---	---

### TRANSPORTER II

h. Name: \_\_\_\_\_  
i. Address: \_\_\_\_\_  
j. Driver Name/Title: \_\_\_\_\_  
k. Phone No.: \_\_\_\_\_ l. Truck No.: \_\_\_\_\_  
m. Vehicle License No./State: \_\_\_\_\_  
Acknowledgement of Receipt of Materials.

n. Driver Signature \_\_\_\_\_ Shipment Date 

--	--	--	--	--	--

## Section III DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: \_\_\_\_\_ c. Phone No.: \_\_\_\_\_  
b. Physical Address: \_\_\_\_\_ d. Mailing Address: 1119  
e. Discrepancy Indication Space: \_\_\_\_\_

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. K. Bannow Signature K. Bannow Receipt Date 

0	4	1	2	1	0
---	---	---	---	---	---

## Section IV ASBESTOS (Generator completes a-d, f, g; Operator\* completes e.)

a. Operator's\* Name: Envirocon b. Operator's\* Phone No.: 757-502-8156 Peta MARR  
c. Operator's\* Address: 3419 VA Beach Blvd, VA Beach, VA 23452  
d. Special Handling Instructions and additional information: \_\_\_\_\_

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

e. Operator's Name & Title: \_\_\_\_\_



## NON-HAZARDOUS SPECIAL WASTE &amp; ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.

If waste is NOT asbestos waste, complete only Sections I, II and III.

No. A 013160

## Section I

## GENERATOR (Generator completes all of Section I)

a. Generator Name: American Marine

b. Generating Location: 425 Camp St. Rd.

c. Address: 425 Camp St. Rd.

d. Address: Same

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

i. ALLIED WASTE CODE

L1 848 10166

Containers

j. Description of Waste: 22 Asbestos (1059, 1022)

Quantity Units No. TYPE

TYPE  
DM - METAL DRUM  
DP - PLASTIC DRUM  
B - BAG  
BA - 6 MIL PLASTIC B/  
or WRAP  
T - TRUCK  
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS  
P - POUNDS  
Y - YARDS  
M<sup>3</sup> - CUBIC METERS  
Y<sup>3</sup> - CUBIC YARDS  
O - OTHER

Generator Authorized Agent Name

Signature

Shipment Date

## Section II

## TRANSPORTER

(Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

## TRANSPORTER I

a. Name: United Disposal

b. Address: 101 E. Union Street

c. Driver Name/Title:

PRINT / TYPE

d. Phone No.:

e. Truck No.:

f. Vehicle License No./State:

Acknowledgement of Receipt of Materials.

g. Driver Signature

Shipment Date

## TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title:

PRINT / TYPE

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgement of Receipt of Materials.

n. Driver Signature

Shipment Date

## Section III

## DESTINATION

(Generator completes a-d; destination site completes e-f)

a. Site Name:

b. Physical Address:

c. Phone No.:

d. Mailing Address:

e. Discrepancy Indication Space:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

## Section IV

## ASBESTOS

(Generator completes a-d; f, g; Operator completes e.)

a. Operator's Name:

b. Operator's Phone No.:

c. Operator's Address:

d. Special Handling Instructions and additional information:

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

e. Operator's Name &amp; Title:

PRINT / TYPE

OPERATOR'S SIGNATURE



UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number	
		VAR 000509281		805-270-2080	004622943 JJK	
5. Generator's Name and Mailing Address AMERICAN MARINE GROUP PO BOX 28 NORFOLK, VA 23501 USA Generator's Phone: 757-990-0033 RM			Generator's Site Address (if different than mailing address) 425 CAMPOSTELLA ROAD NORFOLK, VA 23523			
6. Transporter 1 Company Name TW SERVICES, INC			U.S. EPA ID Number SD980634646			
7. Transporter 2 Company Name			U.S. EPA ID Number			
8. Designated Facility Name and Site Address 1506 NE THIRD STREET MAIRSON, SD 57042 Facility's Phone: 605-256-2800			U.S. EPA ID Number SD980634646			
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit WL/Vol.	13. Waste Codes
		No.	Type			
1.	1. NO. POLYCHLORINATED BI-PHENYLS, SOLIDS, 9, N.O.S. UN3077, PG III, PG=1 LBS	1	CM	10,000	K	
2.						
3.						
4.						
14. Special Handling Instructions and Additional Information 1) PCB/ASBESTOS WIRE - DO NOT FRIABLE DHS: 3/17/2010 BOX 41						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Officer's Printed/Typed Name		Signature		Month Day Year		
TIMOTHY WILLIAMS PRESIDENT				04/07/10		
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name		Signature		Month Day Year		
TWEIL DON METTE				04/07/10		
Transporter 2 Printed/Typed Name		Signature		Month Day Year		
18. Discrepancy						
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
18b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number						
Facility's Phone:						
18c. Signature of Alternate Facility (or Generator) Month Day Year						
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1. 2. 3. 4.						
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name		Signature		Month Day Year		

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**SCHNEIDER LABORATORIES**

INCORPORATED

25112 W. Cary Street • Richmond, Virginia • 23220-5117  
804-353-6778 • 800-785-LABS (5227) • (FAX) 804-359-1475*Excellence in Service and Technology*

AIHA/ELLAP 100527, NVLAP 101150-0, NYELAP/NELAC 11413, CAELAP 2078, NC 593, SC 93003

**LABORATORY ANALYSIS REPORT**

Air Filter Lead Analysis based on NIOSH 7082 Method

Using SLI P22 A14

ACCOUNT #: 953-10-5595  
 CLIENT: APPLIED LABORATORY SERVICES  
 ADDRESS: 4101 GRANBY ST STE 404  
 NORFOLK, VA 23504-1117

DATE RECEIVED: 6/8/2010  
 DATE ANALYZED: 6/8/2010  
 DATE REPORTED: 6/9/2010

PROJECT NAME: Vessel Kittiwake  
 JOB LOCATION: 425 Campostella Rd  
 PROJECT NO.: DMG-001  
 PO NO.:

Sample Type: AIR

SLI Sample No.	Client Sample No.	Collection Date	Sample Description	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total Lead (µg)*	Actual Exp (µg/m³)	8 Hour TWA (µg/m³)
30606672	1	5/20/2010	Acosta, D.	240	3.00	720.00	< 2.00	< 2.78	< 1.39
		8:30 AM							
30606673	2	5/20/2010					< 2.00		

Analysis Run ID: 45863

Analyst: Regina E. Pittman

Total Number of Pages in Report: 1

Results relate only to samples as received by the laboratory.

Final concentration calculations are based on client supplied information.

*Abisola O. Kasali*

Reviewed By

Abisola O. Kasali, Analyst

Visit [www.slabinco.com](http://www.slabinco.com) for current certifications.

Minimum Reporting Limit: 2 µg Total Lead. OSHA PEL is 50 µg/m³ for the 8 hr TWA; OSHA action level is 30 µg/m³ for the 8 Hr TWA. All internal QC parameters were met. Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled. \*Data precision justifies 2 significant figures. Unusual sample conditions, if any, are described. Results are not blank-corrected unless noted by analyst. The client is responsible for verifying applicable standards and limits. See [www.osha.gov](http://www.osha.gov) (29 CFR



**APPLIED  
LABORATORY  
SERVICES**

Commonwealth of Virginia Asbestos  
Analytical Laboratory # 3333000153  
AIHA Laboratory ID #102666

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**Certificate of Analysis**

Analyte type: 25 mm MCEF filter cassette, for total fiber count.  
Method: NIOSH Method 7400-A Rules, Revision 4, dated 15 August 1994.

ALS Account: 05-449

Client: Envirocon Inc.  
3419 Va. Beach Blvd. Ste 13C  
Va. Beach, VA 23452

P O:

TAT: 24 Hour

Removal Type: TSI

LIMS ID: ALS-2010-30400

Project Name: Vessel Kittiwake

ProjectNo: DMG-001

Location: 425 Campostella Rd-Norfolk, VA

Samples Received: 4/14/2010

Date Analyzed: 4/15/2010

Lab Sample ID	Client Sample ID	Sample Date	Sample Type	Sample Description	Fibers/ Fields	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Conc. (f/cc)	8-Hr TWA (f/cc)
30400-1	1	4/1/2010	Excursion	Milton Carranza	1.0 / 100	3.000	30	90.000	<0.030	
30400-2	2	4/1/2010	Personal	Milton Carranza	1.0 / 100	3.000	405	1215.000	<0.005	
										<0.004
30400-3	3	4/1/2010	Area	Outside Area at AFD Exhaust	0.0 / 100	6.000	435	2610.000	<0.005	

Analyst:

  
Kim Mantey

Under this test methodology, the analytes are fibers ( $>5\mu\text{m}$ ). The estimated limit of detection (LOD) is 7 fibers per millimeter of filter area ( $<0.01$  f/cc) with an estimated limit of quantification (LOQ) of 0.005 f/cc. Fibers less than 0.25 micrometers in diameter cannot be detected; therefore, Method 7402 should be considered for definitive analysis in critical situations. The USEPA recommended re-occupancy clearance level is 0.01 or less f/cc of air sampled. The OSHA permissible exposure limit is 0.1 f/cc of air (8-hour time-weighted average). ALS does not verify sample information provided by the client on the submittal form. Results are not blank corrected unless otherwise noted.

**APPLIED  
LABORATORY  
SERVICES**

Commonwealth of Virginia Asbestos  
Analytical Laboratory # 3333000153  
AIHA Laboratory ID #102666

**Certificate of Analysis**

Analyte type: 25 mm MCEF filter cassette, for total fiber count.  
Method: NIOSH Method 7400-A Rules, Revision 4, dated 15 August 1994.

ALS Account: 05-449

Client: Envirocon Inc.  
3419 Va. Beach Blvd. Ste 13C  
Va. Beach, VA 23452

P O:

TAT: 24 Hour

Removal Type: TSI

LIMS ID: ALS-2010-30402

Project Name: Vessel Kittiwake

Project No: DMG-001

Location: 425 Campostella Rd-Norfolk, VA

Samples Received: 4/14/2010

Date Analyzed: 4/15/2010

Lab Sample ID	Client Sample ID	Sample Date	Sample Type	Sample Description	Fibers/ Fields	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Conc. (f/cc)	8-Hr TWA (f/cc)
30402-1	1	3/31/2010	Excursion	W. Ruiz	1.0 / 100	3.000	35	105.000	<0.026	
30402-2	2	3/31/2010	Personal	W. Ruiz	14.0 / 100	3.000	385	1155.000	0.006	
30402-3	3	3/31/2010	Area	Outside Area at Microtrap Exhaust	2.0 / 100	6.000	420	2520.000	<0.005	0.007

Analyst:

  
Kim Mantey

Under this test methodology, the analytes are fibers ( $>5\mu\text{m}$ ). The estimated limit of detection (LOD) is 7 fibers per millimeter of filter area ( $<0.01$  f/cc) with an estimated limit of quantification (LOQ) of 0.005 f/cc. Fibers less than 0.25 micrometers in diameter cannot be detected; therefore, Method 7402 should be considered for definitive analysis in critical situations. The USEPA recommended re-occupancy clearance level is 0.01 or less f/cc of air sampled. The OSHA permissible exposure limit is 0.1 f/cc of air (8-hour time-weighted average). ALS does not verify sample information provided by the client on the submittal form. Results are not blank corrected unless otherwise noted.

# APPLIED LABORATORY SERVICES

Commonwealth of Virginia Asbestos  
Analytical Laboratory # 3333000153  
AIHA Laboratory ID #102666

## Certificate of Analysis

Analyte type: 25 mm MCEF filter cassette, for total fiber count.  
Method: NIOSH Method 7400-A Rules, Revision 4, dated 15 August 1994.

ALS Account: 05-449

Client: Envirocon Inc.  
3419 Va. Beach Blvd. Ste 13C  
Va. Beach, VA 23452

P O:  
TAT: 24 Hour

Removal Type: TSI

LIMS ID: ALS-2010-30393  
Project Name: Vessel Kittiwake  
Project No: DMG-001  
Location: 425 Campostella Rd. Norfolk, VA  
Samples Received: 4/14/2010  
Date Analyzed: 4/15/2010

Lab Sample ID	Client Sample ID	Sample Date	Sample Type	Sample Description	Fibers/ Fields	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Conc. (f/cc)	8-Hr TWA (f/cc)
30393-1	1	3/30/2010	Excursion	M. Gutierrez 7936	1.0 / 100	3.000	30	90.000	<0.030	
30393-2	2	3/30/2010	Personal	M. Gutierrez 7936	1.0 / 100	3.000	360	1080.000	<0.005	
										<0.004
30393-3	3	3/30/2010	Area	Outside at Microtrap Exhaust	5.0 / 100	6.000	435	2610.000	<0.005	

Analyst:

  
Kim Mantey

Under this test methodology, the analytes are fibers ( $>5\mu\text{m}$ ). The estimated limit of detection (LOD) is 7 fibers per millimeter of filter area ( $<0.01$  f/cc) with an estimated limit of quantification (LOQ) of 0.005 f/cc. Fibers less than 0.25 micrometers in diameter cannot be detected; therefore, Method 7402 should be considered for definitive analysis in critical situations. The USEPA recommended re-occupancy clearance level is 0.01 or less f/cc of air sampled. The OSHA permissible exposure limit is 0.1 f/cc of air (8-hour time-weighted average). ALS does not verify sample information provided by the client on the submittal form. Results are not blank corrected unless otherwise noted.



# APPLIED LABORATORY SERVICES

Commonwealth of Virginia Asbestos  
Analytical Laboratory # 3333000153  
AIHA Laboratory ID #102666

## Certificate of Analysis

Analyte type: 25 mm MCEF filter cassette, for total fiber count.  
Method: NIOSH Method 7400-A Rules, Revision 4, dated 15 August 1994.

ALS Account: 05-449

Client: Envirocon Inc.  
3419 Va. Beach Blvd. Ste 13C  
Va. Beach, VA 23452

P O:  
TAT: 24 Hour

Removal Type: TSI

LIMS ID: ALS-2010-30397

Project Name: Vessel Kittiwake

Project No: DMG-001

Location: 425 Campostella Rd-Norfolk, VA

Samples Received: 4/14/2010

Date Analyzed: 4/15/2010

Lab Sample ID	Client Sample ID	Sample Date	Sample Type	Sample Description	Fibers/ Fields	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Conc. (f/cc)	8-Hr TWA (f/cc)
30397-1	1	4/6/2010	Excursion	Milton Carranza	1.0 / 100	3.000	30	90.000	<0.030	
30397-2	2	4/6/2010	Personal	Milton Carranza	1.0 / 100	3.000	360	1080.000	<0.005	
30397-3	3	4/6/2010	Area	Outside Area at AFD Exhaust	2.0 / 100	6.000	410	2460.000	<0.005	<0.004

Analyst:

  
Kim Mantey

Under this test methodology, the analytes are fibers ( $>5\mu\text{m}$ ). The estimated limit of detection (LOD) is 7 fibers per millimeter of filter area ( $<0.01$  f/cc) with an estimated limit of quantification (LOQ) of 0.005 f/cc. Fibers less than 0.25 micrometers in diameter cannot be detected; therefore, Method 7402 should be considered for definitive analysis in critical situations. The USEPA recommended re-occupancy clearance level is 0.01 or less f/cc of air sampled. The OSHA permissible exposure limit is 0.1 f/cc of air (8-hour time-weighted average). ALS does not verify sample information provided by the client on the submittal form. Results are not blank corrected unless otherwise noted.



# APPLIED LABORATORY SERVICES

Commonwealth of Virginia Asbestos  
Analytical Laboratory # 3333000153  
AIHA Laboratory ID #102666

## Certificate of Analysis

Analyte type: 25 mm MCEF filter cassette, for total fiber count.  
Method: NIOSH Method 7400-A Rules, Revision 4, dated 15 August 1994.

ALS Account: 05-449

Client: Envirocon Inc.  
3419 Va. Beach Blvd. Ste 13C  
Va. Beach, VA 23452

P O:  
TAT: 24 Hour

Removal Type: TSI

LIMS ID: ALS-2010-30396  
Project Name: Vessel Kittiwake  
Project No: DMG-001  
Location: 425 Campostella Rd-Norfolk, VA  
Samples Received: 4/14/2010  
Date Analyzed: 4/15/2010

Lab Sample ID	Client Sample ID	Sample Date	Sample Type	Sample Description	Fibers/Fields	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Conc. (f/cc)	8-Hr TWA (f/cc)
30396-1	1	4/2/2010	Excursion	Luis Vasquez	2.0 / 100	3.000	30	90.000	<0.030	
30396-2	2	4/2/2010	Personal	Luis Vasquez	0.0 / 100	3.000	405	1215.000	<0.005	
30396-3	3	4/2/2010	Area	Outside Area at APD Exhaust	0.0 / 100	6.000	435	2610.000	<0.005	<0.004

Analyst:

Kim Mantey

Under this test methodology, the analytes are fibers ( $>5\mu\text{m}$ ). The estimated limit of detection (LOD) is 7 fibers per millimeter of filter area ( $<0.01$  f/cc) with an estimated limit of quantification (LOQ) of 0.005 f/cc. Fibers less than 0.25 micrometers in diameter cannot be detected; therefore, Method 7402 should be considered for definitive analysis in critical situations. The USEPA recommended re-occupancy clearance level is 0.01 or less f/cc of air sampled. The OSHA permissible exposure limit is 0.1 f/cc of air (8-hour time-weighted average). ALS does not verify sample information provided by the client on the submittal form. Results are not blank corrected unless otherwise noted.

# APPLIED LABORATORY SERVICES

Commonwealth of Virginia Asbestos  
Analytical Laboratory # 3333000153  
AIHA Laboratory ID #102666

## Certificate of Analysis

Analyte type: 25 mm MCEF filter cassette, for total fiber count.  
Method: NIOSH Method 7400-A Rules, Revision 4, dated 15 August 1994.

ALS Account: 05-449

Client: Envirocon Inc.  
3419 Va. Beach Blvd. Ste 13C  
Va. Beach, VA 23452

P O:  
TAT: 24 Hour

Removal Type: TSI

LIMS ID: ALS-2010-30392  
Project Name: Vessel Kittiwake  
Project No: DMG-001  
Location: 425 Campostella Rd. Norfolk, VA  
Samples Received: 4/14/2010  
Date Analyzed: 4/15/2010

Lab Sample ID	Client Sample ID	Sample Date	Sample Type	Sample Description	Fibers/ Fields	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Conc. (f/cc)	8-Hr TWA (f/cc)
30392-1	1	4/5/2010	Excursion	Marcos Gutierrez	2.0 / 100	3.000	30	90.000	<0.030	
30392-2	2	4/5/2010	Personal	Marcos Gutierrez	0.0 / 100	3.000	405	1215.000	<0.005	
30392-3	3	4/5/2010	Area	Outside Area AFD Exhaust	2.0 / 100	6.000	390	2340.000	<0.005	<0.004

Analyst:

Kim Manley

Under this test methodology, the analytes are fibers ( $>5\mu m$ ). The estimated limit of detection (LOD) is 7 fibers per millimeter of filter area ( $<0.01$  f/cc) with an estimated limit of quantification (LOQ) of 0.005 f/cc. Fibers less than 0.25 micrometers in diameter cannot be detected; therefore, Method 7402 should be considered for definitive analysis in critical situations. The USEPA recommended re-occupancy clearance level is 0.01 or less f/cc of air sampled. The OSHA permissible exposure limit is 0.1 f/cc of air (8-hour time-weighted average). ALS does not verify sample information provided by the client on the submittal form. Results are not blank corrected unless otherwise noted.

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**APPLIED  
LABORATORY  
SERVICES**

Commonwealth of Virginia Asbestos  
Analytical Laboratory # 3333000153  
AIHA Laboratory ID #102666

**Certificate of Analysis**

Analyte type: 25 mm MCEF filter cassette, for total fiber count.  
Method: NIOSH Method 7400-A Rules, Revision 4, dated 15 August 1994.

ALS Account: 05-449

Client: Envirocon Inc.  
3419 Va. Beach Blvd. Ste 13C  
Va. Beach, VA 23452

P O:

TAT: ALS Immediate

Removal Type: TSI

LIMS ID: ALS-2010-30423

Project Name: USS Kittiwake

Project No: 8952

Location: 425 Campostella Rd, Norfolk

Samples Received: 4/16/2010

Date Analyzed: 4/16/2010

Lab Sample ID	Client Sample ID	Sample Date	Sample Type	Sample Description	Fibers/ Fields	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Conc. (f/cc)	8-Hr TWA (f/cc)
30423-1	1	4/16/2010	Clearance	Boiler Room	8.0 / 100	12.000	100	1200.000	<0.005	
30423-2	2	4/16/2010	Clearance	Kitchen	13.0 / 100	12.000	100	1200.000	0.005	
30423-3	3	4/16/2010	Clearance	Decompression Room	9.0 / 100	12.000	100	1200.000	<0.005	
30423-4	4	4/16/2010	Clearance	Decompression/Hull Area	18.0 / 100	12.000	100	1200.000	0.007	
30423-5	5	4/16/2010	Blank	Blank	0.0 / 100	0.000	0	0.000		
30423-6	6	4/16/2010	Blank	Blank	0.0 / 100	0.000	0	0.000		





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Lab Sample ID	Client Sample ID	Sample Date	Sample Type	Sample Description	Fibers/ Fields	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Conc. (f/cc)	8-Hr TWA (f/cc)
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Analyst:

Stephanie Bustamante

Under this test methodology, the analytes are fibers ( $>5\mu\text{m}$ ). The estimated limit of detection (LOD) is 7 fibers per millimeter of filter area ( $<0.01$  f/cc) with an estimated limit of quantification (LOQ) of 0.005 f/cc. Fibers less than 0.25 micrometers in diameter cannot be detected; therefore, Method 7402 should be considered for definitive analysis in critical situations. The USEPA recommended re-occupancy clearance level is 0.01 or less f/cc of air sampled. The OSHA permissible exposure limit is 0.1 f/cc of air (8-hour time-weighted average). ALS does not verify sample information provided by the client on the submittal form. Results are not blank corrected unless otherwise noted.



**APPLIED  
LABORATORY  
SERVICES**

Commonwealth of Virginia Asbestos  
Analytical Laboratory # 3333000153  
AIHA Laboratory ID #102666

**Certificate of Analysis**

Analyte type: 25 mm MCEF filter cassette, for total fiber count.  
Method: NIOSH Method 7400-A Rules, Revision 4, dated 15 August 1994.

ALS Account: 05-449

Client: Envirocon Inc.  
3419 Va. Beach Blvd. Ste 13C  
Va. Beach, VA 23452

P O:  
TAT: 24 Hour


Removal Type: Full Containment NPE

LIMS ID: ALS-2010-30459  
Project Name: Vessel Kittiwake  
Project No: DMG-001  
Location: Campostella Rd. Norfolk  
Samples Received: 4/21/2010  
Date Analyzed: 4/22/2010

Lab Sample ID	Client Sample ID	Sample Date	Sample Type	Sample Description	Fibers/ Fields	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Conc. (f/cc)	8-Hr TWA (f/cc)
30459-1	1	4/20/2010	Excursion	M. Gutierrez Forward Equip Room	1.0 / 100	2,500	30	75.000	<0.036	
30459-2	2	4/20/2010	Personal	M. Gutierrez Forward Equip Room	3.0 / 100	2,500	390	975.000	<0.005	

&lt;0.004

Analyst:

  
Stephanie Bustamante

Under this test methodology, the analytes are fibers ( $>5\mu\text{m}$ ). The estimated limit of detection (LOD) is 7 fibers per millimeter of filter area ( $<0.01$  f/cc) with an estimated limit of quantification (LOQ) of 0.005 f/cc. Fibers less than 0.25 micrometers in diameter cannot be detected; therefore, Method 7402 should be considered for definitive analysis in critical situations. The USEPA recommended re-occupancy clearance level is 0.01 or less f/cc of air sampled. The OSHA permissible exposure limit is 0.1 f/cc of air (8-hour time-weighted average). ALS does not verify sample information provided by the client on the submittal form. Results are not blank corrected unless otherwise noted.

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APPLIED  
LABORATORY  
SERVICES, LLCChain of Custody  
Asbestos Identification

Client Name: Enclinocon, Inc  
Address: 3419 Via Beach Blvd  
Va. Beach, Va. 23452  
Client PO#: \_\_\_\_\_  
Project #: DMG-001

Project Name: Vessel Kitiwake  
Project Location: Campbell Rd Norfolk  
Removal Type: Full Containment NPE  
Collected by: Luis Vasquez  
Date Submitted: 4-21-10  
ALS LIMS #: 30459

\*Analytical Method requested: (circle one)

PLM

(TEM)

Turn-around-time requested: (circle one)

Immediate

24 Hour

ASTM 5755

Standard (3-5 days)

Sample Number	Sample Date	Sample Location	Sample Description
1	4/20/10	M. Gutierrez Forward Equip Room	EXC
2	4/20/10	M. Gutierrez Forward equip. Room	Per

\*PLM - Polarized Light Microscopy; TEM - Transmission Electron Microscopy; ASTM 5755 - Dust by TEM

Special Instructions:

Released by	Company	Date/Time	Received by	Company	Date/Time
<u>PLM</u>	<u>enclinocon</u>	<u>4/21/10</u>	<u>[Signature]</u>	<u>ALS</u>	<u>4/21/10</u>

4101 Granby Street, Suite 404, Norfolk, Virginia 23504 TEL (757) 623-0121 FAX (757) 623-2785  
Commonwealth of Virginia Analytical Laboratory License 3333000153  
NVLAP Lab ID #200515-0

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APPLIED  
LABORATORY  
SERVICES, LLC

## Chain of Custody Asbestos Identification

Client Name: ENVIROCON, INC.  
Address: 3419 Va Beach Blvd  
Va Beach VA 23452  
Client PO#: \_\_\_\_\_  
Project #: DMG-001

Project Name: Vessel Kittiwake  
Project Location: Campostella Rd. Norfolk VA  
Removal Type: Full Containment NPE  
Collected by: Luis Vasquez  
Date Submitted: 4-21-10  
ALS LIMS #: 30117

\*Analytical Method requested: (circle one) PLM  
Turn-around-time requested: (circle one) Immediate

(TEM)  
(24 Hour)

ASTM 5755  
Standard (3-5 days)

[illegible]

\*PLM - Polarized Light Microscopy; TEM - Transmission Electron Microscopy; ASTM 5755 - Dust by TEM

## Special Instructions:

Released by <i>Ther</i>	Company <i>ENVIROCON</i>	Date/Time <i>4/21/10</i>	Received by <i>[Signature]</i>	Company <i>AS</i>	Date/Time <i>4/21/10</i>
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4101 Granby Street, Suite 414, Norfolk, Virginia 23504 TEL (757) 623-0121 FAX (757) 623-2785  
Commonwealth of Virginia Analytical Laboratory License 3333000153  
NVLAP Lab ID #200515-0



**APPLIED  
LABORATORY  
SERVICES**

Commonwealth of Virginia Asbestos  
Analytical Laboratory # 3333000153  
AIHA Laboratory ID #102666

**Certificate of Analysis**

Analyte type: 25 mm MCEF filter cassette, for total fiber count.  
Method: NIOSH Method 7400-A Rules, Revision 4, dated 15 August 1994.

ALS Account: 05-449

Client: Envirocon Inc.  
3419 Va. Beach Blvd. Ste 13C  
Va. Beach, VA 23452

P O:

TAT: ALS Immediate

Removal Type: TSI

LIMS ID: ALS-2010-30470

Project Name: USS Kittiwake

Project No: 8982

Location: Forward Deck

Samples Received: 4/22/2010

Date Analyzed: 4/22/2010

Lab Sample ID	Client Sample ID	Sample Date	Sample Type	Sample Description	Fibers/ Fields	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Conc. (f/cc)	8-Hr TWA (f/cc)
30470-1	1	4/22/2010	Clearance	Forward Deck Rm 1	20.0 / 100	12.000	100	1200.000	0.008	
30470-2	2	4/22/2010	Clearance	Forward Deck Rm 2	10.5 / 100	12.000	100	1200.000	<0.005	
30470-3	3	4/22/2010	Clearance	Forward Deck Rm 3	16.0 / 100	12.000	100	1200.000	0.007	
30470-4	4	4/22/2010	Blank	Blank	1.0 / 100	0.000	0	0.000		
30470-5	5	4/22/2010	Blank	Blank	1.0 / 100	0.000	0	0.000		

Analyst:

  
Stephanie Bustamante

Under this test methodology, the analytes are fibers ( $>5\mu\text{m}$ ). The estimated limit of detection (LOD) is 7 fibers per millimeter of filter area ( $<0.01$  f/cc) with an estimated limit of quantification (LOQ) of 0.005 f/cc. Fibers less than 0.25 micrometers in diameter cannot be detected; therefore, Method 7402 should be considered for definitive analysis in critical situations. The USEPA recommended re-occupancy clearance level is 0.01 or less f/cc of air sampled. The OSHA permissible exposure limit is 0.1 f/cc of air (8-hour time-weighted average). ALS does not verify sample information provided by the client on the submittal form. Results are not blank corrected unless otherwise noted.





**APPLIED  
LABORATORY  
SERVICES**

Commonwealth of Virginia Asbestos  
Analytical Laboratory # 3333000153  
AIHA Laboratory ID #102666

**Certificate of Analysis**

Analyte type: 25 mm MCEF filter cassette, for total fiber count.  
Method: NIOSH Method 7400-A Rules, Revision 4, dated 15 August 1994.

ALS Account: 05-449

Client: Envirocon Inc.  
3419 Va. Beach Blvd. Ste 13C  
Va. Beach, VA 23452

P O:  
TAT: 24 Hour

Removal Type:

LIMS ID: ALS-2010-30460  
Project Name: Vessel Kittiwake  
Project No: DMG-001  
Location: Campostella Rd. Norfolk, VA  
Samples Received: 4/21/2010  
Date Analyzed: 4/22/2010

Lab Sample ID	Client Sample ID	Sample Date	Sample Type	Sample Description	Fibers/ Fields	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Conc. (f/cc)	8-Hr TWA (f/cc)
30460-1	1	4/19/2010	Excursion	Wilson Ruiz Forward Equipment Room	6.0 / 100	2.500	30	75.000	0.039	
30460-2	2	4/19/2010	Personal	Wilson Ruiz Forward Equipment Room	1.0 / 100	2.500	330	825.000	<0.005	

0.005

Analyst:

  
Stephanie Bustamante

Under this test methodology, the analytes are fibers ( $>5\mu\text{m}$ ). The estimated limit of detection (LOD) is 7 fibers per millimeter of filter area ( $<0.01$  f/cc) with an estimated limit of quantification (LOQ) of 0.005 f/cc. Fibers less than 0.25 micrometers in diameter cannot be detected; therefore, Method 7402 should be considered for definitive analysis in critical situations. The USEPA recommended re-occupancy clearance level is 0.01 or less f/cc of air sampled. The OSHA permissible exposure limit is 0.1 f/cc of air (8-hour time-weighted average). ALS does not verify sample information provided by the client on the submittal form. Results are not blank corrected unless otherwise noted.

**APPLIED  
LABORATORY  
SERVICES**

Commonwealth of Virginia Asbestos  
Analytical Laboratory # 3333000153  
AIHA Laboratory ID #102666

**Certificate of Analysis**

Analyte type: 25 mm MCEF filter cassette, for total fiber count.  
Method: NIOSH Method 7400-A Rules, Revision 4, dated 15 August 1994.

ALS Account: 05-449

Client: Envirocon Inc.  
3419 Va. Beach Blvd. Ste 13C  
Va. Beach, VA 23452

P O:  
TAT: 24 Hour

Removal Type:

LIMS ID: ALS-2010-30533  
Project Name: Vessel Kittiwake  
Project No: DMG-001  
Location: 425 Campostella Rd Norfolk  
Samples Received: 4/29/2010  
Date Analyzed: 4/29/2010

Lab Sample ID	Client Sample ID	Sample Date	Sample Type	Sample Description	Fibers/ Fields	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Conc. (f/cc)	8-Hr TWA (f/cc)
30533-1	1	4/23/2010	Personal	W. Ruiz AFT Equip Room	20.0/100	3.000	390	1170.000	0.008	
30533-2	2	4/23/2010	Excursion	AFT Equip Room	0.0/100	3.000	30	90.000	<0.030	

0.009

Analyst:

  
Stephanie Bustamante

Under this test methodology, the analytes are fibers ( $>5\mu\text{m}$ .) The estimated limit of detection (LOD) is 7 fibers per millimeter of filter area ( $<0.01$  f/cc) with an estimated limit of quantification (LOQ) of 0.005 f/cc. Fibers less than 0.25 micrometers in diameter cannot be detected; therefore, Method 7402 should be considered for definitive analysis in critical situations. The USEPA recommended re-occupancy clearance level is 0.01 or less f/cc of air sampled. The OSHA permissible exposure limit is 0.1 f/cc of air (8-hour time-weighted average). ALS does not verify sample information provided by the client on the submittal form. Results are not blank corrected unless otherwise noted.

# APPLIED LABORATORY SERVICES, LLC

## Chain of Custody Air Sample Analysis

Client Name: ENVIRONCO, INC  
 Address: 3415 Va Beach Blvd  
Va Beach, Va. 23452  
 Client PO#: \_\_\_\_\_  
 Project #: DMG-001

Project Name: Vessel Kitiwake  
 Project Location: 425 Campestella Rd  
Alameda, CA  
 Date Submitted: 4-29-10  
 ALS LIMS #: 30533

Analytical Method requested: (circle one)

Turn-around-time requested: (circle one)

PCM  
Immediate

TEM  
24 Hour

LEAD

OTHER

Standard (3-5 days)

Sample No.	Sample Date	*Sample Type	**Sample Location/Person-SSN	Pump Start Time	Pump Stop Time	Total Time	Average Flow Rate	Pump No.
1	4/28/10	P	W. Ruiz AFT Equip Room	0800	1430	390	3.0	5
2	4/28/10	EX	AFT Equip Room	0730	0800	30	3.0	5

\*Sample Types = Area (A); Excursion (E); Personal (P); Clearance (C); Blank (B)

\*\*Personal and Excursion samples must list the name and social security number of the individual sampled

Special Instructions: \_\_\_\_\_

Released by	Company	Date/Time	Received by	Company	Date/Time
<u>RTV</u>	<u>ENVIRO</u>	<u>4/29/10</u>	<u>Bennett</u>	<u>ALS</u>	<u>4-29-10</u>
			<u>ALS</u>		<u>4/29/10</u>



**APPLIED  
LABORATORY  
SERVICES**

Commonwealth of Virginia Asbestos  
Analytical Laboratory # 3333000153  
AIHA Laboratory ID #102666

**Certificate of Analysis**

Analyte type: 25 mm MCEF filter cassette, for total fiber count.  
Method: NIOSH Method 7400-A Rules, Revision 4, dated 15 August 1994.

ALS Account: 05-449

Client: Envirocon Inc.  
3419 Va. Beach Blvd. Ste 13C  
Va. Beach, VA 23452

P O:

TAT: ALS Immediate

Removal Type: Pipe Insulation

LIMS ID: ALS-2010-30590

Project Name: USS Kittiwake

ProjectNo: 8952

Location: Forward Compartment

Samples Received: 5/6/2010

Date Analyzed: 5/6/2010

Lab Sample ID	Client Sample ID	Sample Date	Sample Type	Sample Description	Fibers/ Fields	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Conc. (f/cc)	8-Hr TWA (f/cc)
30590-1	1	5/6/2010	Clearance	IWA	5.5 / 100	12.000	100	1200.000	<0.005	
30590-2	2	5/6/2010	Clearance	IWA	3.0 / 100	12.000	100	1200.000	<0.005	
30590-3	3	5/6/2010	Clearance	IWA	7.5 / 100	12.000	100	1200.000	<0.005	
30590-4	4	5/6/2010	Clearance	IWA	6.0 / 100	12.000	100	1200.000	<0.005	
30590-5	5	5/6/2010	Blank	Blank	0.0 / 100	0.000	0	0.000		
30590-6	6	5/6/2010	Blank	Blank	0.0 / 100	0.000	0	0.000		

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Lab Sample ID	Client Sample ID	Sample Date	Sample Type	Sample Description	Fibers/ Fields	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Conc. (f/cc)	8-Hr TWA (f/cc)
<i>[Signature]</i>										
Analyst: Stephanie Bustamante										

Under this test methodology, the analytes are fibers ( $>5\mu\text{m}$ .) The estimated limit of detection (LOD) is 7 fibers per millimeter of filter area ( $<0.01$  f/cc) with an estimated limit of quantification (LOQ) of 0.005 f/cc. Fibers less than 0.25 micrometers in diameter cannot be detected; therefore, Method 7402 should be considered for definitive analysis in critical situations. The USEPA recommended re-occupancy clearance level is 0.01 or less f/cc of air sampled. The OSHA permissible exposure limit is 0.1 f/cc of air (8-hour time-weighted average). ALS does not verify sample information provided by the client on the submittal form. Results are not blank corrected unless otherwise noted.

















APPLIED  
LABORATORY  
SERVICES, LLC

## Chain of Custody Air Sample Analysis

Client Name: ENVIROCON, INC  
Address: 346 Va Beach Blvd  
Va Beach Va 23452  
Client PO# \_\_\_\_\_  
Project #: DMG-001

Project Name: Vessel Kittiwake  
Project Location: 42.5 Campustella Rd  
Norfolk, Va.  
Date Submitted: \_\_\_\_\_  
ALS LIMS #: \_\_\_\_\_

Analytical Method requested: (circle one)

PCM

TEM

LEAD

OTHER

Turn-around-time requested: (circle one)

Immediate

24 Hour

~~Standard (3-5 days)~~

[illegible]

\*Sample Types = Area (A); Excursion (E); Personal (P); Clearance (C); Blank (B)

\*\*Personal and Excursion samples must list the name and social security number of the individual sampled

Special Instructions: FAX results

Released by	Company	Date/Time	Received by	Company	Date/Time
Fateh	ENXING	6/4/10	BISL	ALS	4 Jun 10



# APPLIED LABORATORY SERVICES, LLC

## Chain of Custody Air Sample Analysis

Client Name: ENVIRONMENT, INC  
Address: 344 Va Beach Blvd  
Va Beach Va 23452  
Client PO# \_\_\_\_\_  
Project #: DMG-001

Project Name: Vessel Kittiwake  
Project Location: 425 Campustella Rd  
Norfolk Va.  
Date Submitted: \_\_\_\_\_  
ALS LIMS #: \_\_\_\_\_

Analytical Method requested: (circle one)  
Turn-around-time requested: (circle one)

PCM  
Immediate

TEM  
24 Hour

LEAD OTHER  
Standard (3-5 days)

Sample No.	Sample Date	*Sample Type	**Sample Location/Person-SSN	Pump Start Time	Pump Stop Time	Total Time	Average Flow Rate	Pump No.
1	6-1-10	P	Mmmmm Gutierrez	0800	1130	210	3.0	7
2	6-1-10	B.	_____					

\*Sample Types = Area (A); Excursion (E); Personal (P); Clearance (C); Blank (B)

\*\*Personal and Excursion samples must list the name and social security number of the individual sampled

Special Instructions: FAX results

Released by	Company	Date/Time	Received by	Company	Date/Time
<u>[Signature]</u>	<u>ENV/INC</u>	<u>6/4/10</u>	<u>BWL</u>	<u>ACS</u>	<u>4 June 10</u>



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**APPLIED  
LABORATORY  
SERVICES, LLC**
**Chain of Custody  
Air Sample Analysis**

Client Name: ENVIRONMENTAL, INC  
 Address: 3446 Va Beach Blvd  
Va Beach Va 23452  
 Client PO#: \_\_\_\_\_  
 Project #: DMG-001

Project Name: Vessel Kittiwake  
 Project Location: 425 Campestella Rd  
Norfolk Va.  
 Date Submitted: \_\_\_\_\_  
 ALS LIMS #: \_\_\_\_\_

Analytical Method requested: (circle one)  
 Turn-around-time requested: (circle one)

PCM  
 Immediate

TEM  
 24 Hour

~~LEAD~~ ~~OTHER~~  
 Standard (3-5 days)

Sample No.	Sample Date	*Sample Type	**Sample Location/Person-SSN	Pump Start Time	Pump Stop Time	Total Time	Average Flow Rate	Pump No.
1	5/19/10	P	Carlos Cortez	0830	1400	330	3.0	7
2	5/19/10	B	_____					

\*Sample Types = Area (A); Excursion (E); Personal (P); Clearance (C); Blank (B)

\*\*Personal and Excursion samples must list the name and social security number of the individual sampled

Special Instructions: FAX results

Released by	Company	Date/Time	Received by	Company	Date/Time
<u>P. Kelly</u>	<u>ENVIRONMENTAL</u>	<u>6/4/10</u>	<u>BLW</u>	<u>ALS</u>	<u>4 June 10</u>

# APPLIED LABORATORY SERVICES, LLC

## Chain of Custody Air Sample Analysis

Client Name: ENCORCON, Inc  
 Address: 3419 Va Beach Blvd  
Va Beach VA 23462  
 Client PO# \_\_\_\_\_  
 Project #: \_\_\_\_\_

Project Name: Vessel Kittiwake  
 Project Location: 425 Campusella Rd  
Norfolk VA  
 Date Submitted: \_\_\_\_\_  
 ALS LIMS #: \_\_\_\_\_

Analytical Method requested: (circle one)

PCM

~~TEMI~~LEAD~~OTHER~~

Turn-around-time requested: (circle one)

Immediate

24 Hour~~Standard (3-5 days)~~

Sample No.	Sample Date	*Sample Type	**Sample Location/Person-SSN	Pump Start Time	Pump Stop Time	Total Time	Average Flow Rate	Pump No.
1	5/12/10	P	Marcel Gutierrez	0900	1200	240	3.0	7
2	5/12/10	B	_____					

\*Sample Types = Area (A); Excursion (E); Personal (P); Clearance (C); Blank (B)

\*\*Personal and Excursion samples must list the name and social security number of the individual sampled

Special Instructions: FAIR results

Released by	Company	Date/Time	Received by	Company	Date/Time
<u>Pat H</u>	<u>ENCORCON</u>	<u>6/4/10</u>	<u>[Signature]</u>	<u>ALS</u>	<u>4/10/10</u>

### **Schedule 6**

**Photos of Cable removal in sonar room and sealing of cavities after removal**  
**Photos of rubber gasket removal from sea cocks and the sealing of cavities after removal**



**Schedule 7    Video of hull cleaning**